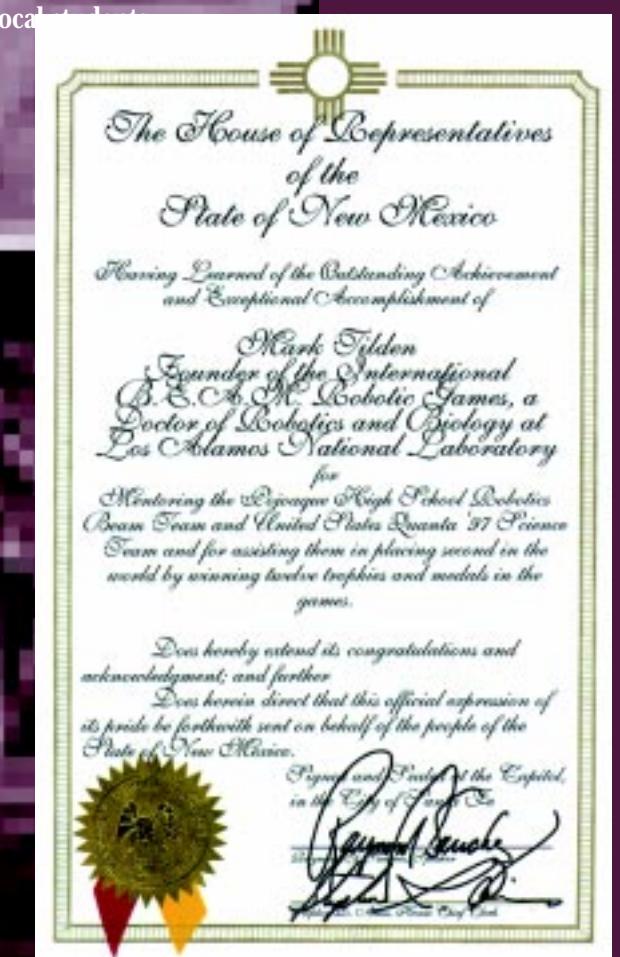


Appendices



Physics Division initiated a well-received educational outreach program in 1998, in which members of our technical staff visit local high schools to present lectures and demonstrations. We are also involved in other outreach efforts that promote learning in science, such as the Teacher Opportunities to Promote Science (TOPS) Program, the Hertz Foundation, and the International Biological Electronics Aesthetic Mechanics (BEAM) Robotics Games. Shown here is a picture of robotics expert Mark Tilden (P-21) working with a student in preparation for the BEAM Games. Tilden was presented with a certificate of achievement from the New Mexico House of Representatives for his success in mentoring local students.



Appendix A

Physics Division Data

FY97–FY98

		<u>FY97</u>	<u>FY98</u>
P-21: Biophysics	Operating Costs ^a	4.4	4.9
	Staff Members ^b	13.7	16.0
	Graded Employees ^c	9.2	13.0
P-22: Hydrodynamic and X-Ray Physics	Operating Costs	12.5	12.1
	Staff Members	28.8	30.0
	Graded Employees	36.8	32.0
P-23: Neutron Science and Technology	Operating Costs	13.6	13.6
	Staff Members	40.0	36.0
	Graded Employees	20.0	23.0
P-24: Plasma Physics	Operating Costs	15.5	13.7
	Staff Members	40.3	36.0
	Graded Employees	41.2	31.0
P-25: Subatomic Physics	Operating Costs	10.6	10.7
	Staff Members	38.8	34.0
	Graded Employees	15.7	17.0
P-DO: Division Office	Operating Costs ^d	3.0	5.6
	Staff Members ^e	9.6	12.0
	Graded Employees ^e	8.6	11.0
		Total Operating Costs	59.6
		Capital Equipment Costs	<u>4.9</u>
		Total Costs	64.6
		Total Income	<u>64.6</u>
		Total Underrun/(Overrun)	0.0
			60.7
			<u>2.3</u>
			63.0
			<u>65.6</u>
			2.6

^aCosts, income, and underrun/overrun are reported in \$M.

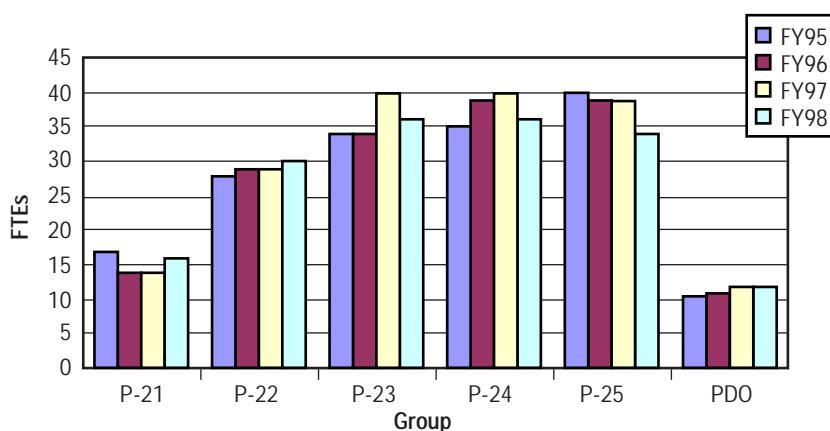
^bStaff Members are reported in full-time employees (FTEs) and include technical staff members (TSMs), TSM contractors, postdoctoral employees, and management.

^cGraded Employees are reported in FTEs and include office support, technicians, graduate research assistants (GRAs), undergraduate students (UGSs), and contractors.

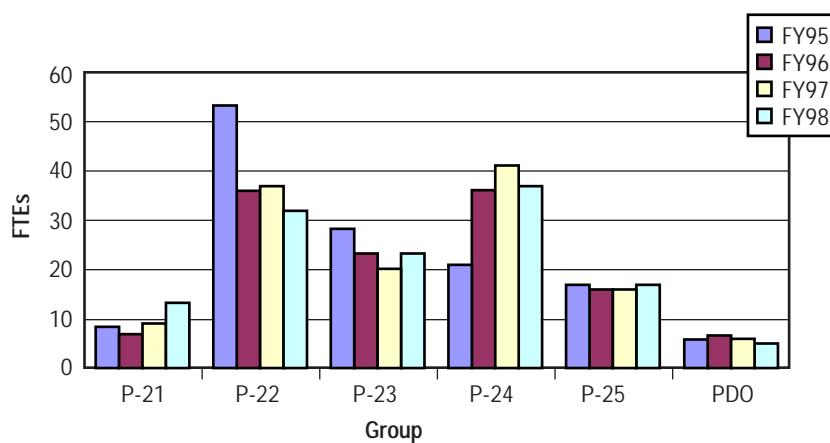
^dThis value is the direct costs.

^eThis value includes indirect and direct FTEs.

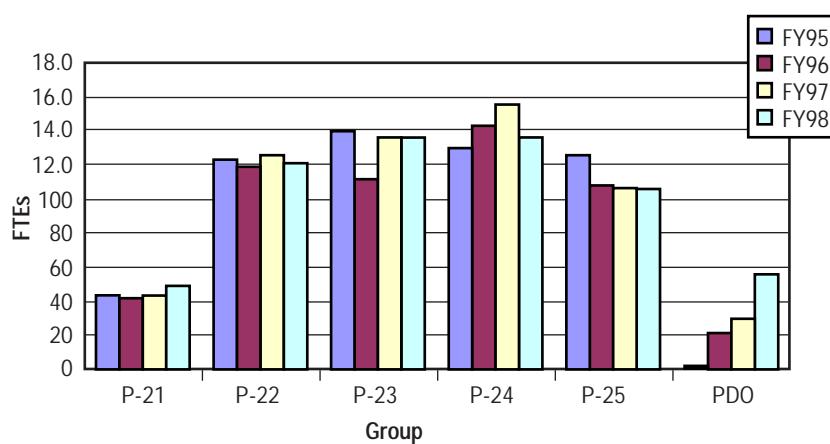
Physics Division Staff Members



Physics Division Graded Employees

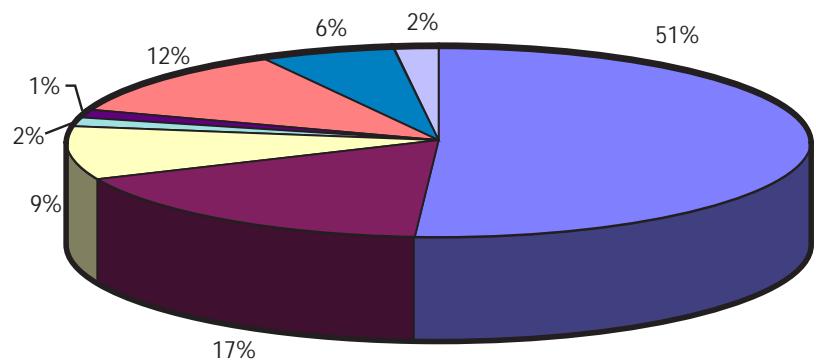


Physics Division Costs

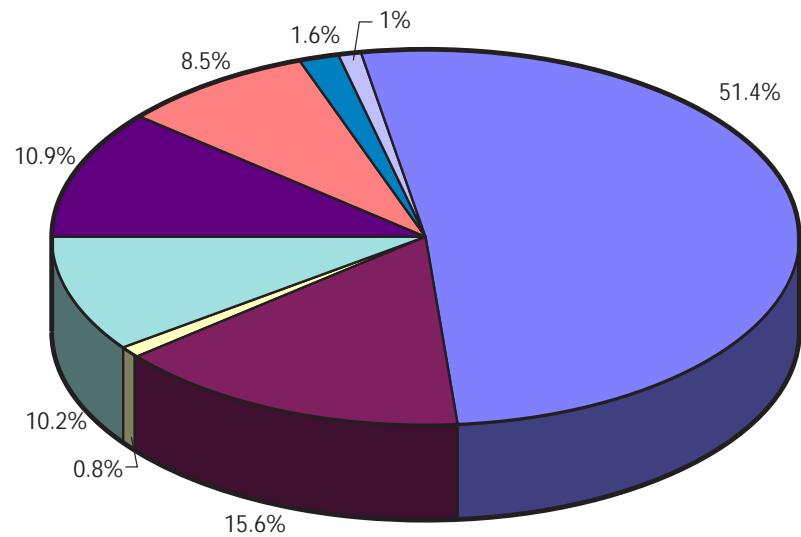


Appendix A

FY97 Operating Costs: \$59.7M



FY98 Operating Costs: \$52.1M



- Weapons
- LANSC/Energy Research
- Miscellaneous (General and Administrative, Environmental Management, etc.)
- Laboratory and University of California Directed Research and Development
- Atlas Construction
- Reimbursables
- Verification and Control
- Cooperative Research and Development Agreements (CRADAs)

Appendix B

Publications and Conferences

1997 Journal Articles

- M. Acciarri, *et al.* (L3 Collaboration), “Cross Section of Hadron Production in $\gamma\gamma$ Collisions at LEP,” *Physics Letters B* 408, 450 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Hard-Photon Production at $\sqrt{s} = 161$ and 172 GeV at LEP,” *Physics Letters B* 413, 159 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Inclusive J, ψ' and χ_c Production in Hadronic Z Decays,” *Physics Letters B* 407, 351 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “ K_s^0 and Λ Production in Quark and Gluon Jets at LEP,” *Physics Letters B* 407, 389 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of $D_s^- \rightarrow \tau^-\bar{\nu}_\tau$ and a New Limit for $B^- \rightarrow \tau^-\bar{\nu}_\tau$,” *Physics Letters B* 396, 327 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of Hadron and Lepton-Pair Production at $161 \text{ GeV} < \sqrt{s} < 172 \text{ GeV}$ at LEP,” *Physics Letters B* 407, 361 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of Inclusive w and η' Production in Hadronic Z Decays,” *Physics Letters B* 393, 465 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurements of Mass, Width and Gauge Couplings of the W Boson at LEP,” *Physics Letters B* 413, 176 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of W -Pair Cross Sections in e^+e^- Interactions at $\sqrt{s} = 172 \text{ GeV}$ and W -Decay Branching Fractions,” *Physics Letters B* 407, 419 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Neutral-Current 4-Fermion Production in e^+e^- Interactions at $130 \text{ GeV} \leq \sqrt{s} \leq 172 \text{ GeV}$,” *Physics Letters B* 413, 191 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Pair-Production of W Bosons in e^+e^- Interactions at $\sqrt{s} = 161 \text{ GeV}$,” *Physics Letters B* 398, 223 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Production of e, μ , and τ Pairs in Untagged Two-Photon Collisions at LEP,” *Physics Letters B* 407, 341 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Production of Single W Bosons at LEP,” *Physics Letters B* 403, 168 (1997).

- M. Acciarri, *et al.* (L3 Collaboration), “QCD Studies and Determination of α_s in e^+e^- Collisions at $\sqrt{s} = 161$ GeV and $\sqrt{s} = 172$ GeV,” *Physics Letters B* 404, 390 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Resonance Formation in the $\pi^+\pi^-\pi^0$ Final State in Two-Photon Collisions,” *Physics Letters B* 413, 147 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Search for Anomalous Four-Jet Events in e^+e^- Annihilation at $\sqrt{s} = 130\text{--}172$ GeV,” *Physics Letters B* 411, 330 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Search for Excited Leptons in e^+e^- Annihilation at $\sqrt{s} = 161$ GeV,” *Physics Letters B* 401, 139 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Search for Exclusive B Decays to J and η or π^0 with the L3 Detector,” *Physics Letters B* 391, 481 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Search for Heavy Neutral and Charged Leptons in e^+e^- Annihilation at $\sqrt{s} = 161$ and $\sqrt{s} = 172$ GeV,” *Physics Letters B* 412, 189 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Search for Neutral B Meson Decays to Two Charged Leptons,” *Physics Letters B* 391, 474 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Search for New Physics in Energetic Single Photon Production in e^+e^- Annihilation at the Z Resonance,” *Physics Letters B* 412, 201 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Search for the Standard Model Higgs Boson in e^+e^- Interactions at $161 \leq \sqrt{s} \leq 172$ GeV,” *Physics Letters B* 411, 373 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Single and Multi-Photon Events with Missing Energy in e^+e^- Collisions at $161 \text{ GeV} < \sqrt{s} < 172 \text{ GeV}$,” *Physics Letters B* 415 299 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Study of Hadronic Events and Measurements of a_s between 30 and 91 GeV,” *Physics Letters B* 411, 339 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Study of the Weak Charged Hadronic Current in B Decays,” *Physics Letters B* 393, 477 (1997).
- M. Acciarri, *et al.* (L3 Collaboration), “Upsilon Production in Z Decays,” *Physics Letters B* 413 167 (1997).
- S. Adler, M. S. Atiya, I.-H. Chiang, J. S. Frank, J. S. Haggerty, T. F. Kycia, K. K. Li, L. S. Littenberg, A. Sambamurti, A. Stevens, R. C. Strand, C. Witzig, W. C. Louis, D. S. Akerib, M. Ardebili, M. Convery, M. M. Ito,

- D. R. Marlow, R. McPherson, P. D. Meyers, M. A. Selen, F. C. Shoemaker, A. J. S. Smith, E. W. Blackmore, D. A. Bryman, L. Felawka, A. Konaka, Y. Kuno, J. A. MacDonald, T. Numao, P. Padley, J.-M. Poutissou, R. Poutissou, J. Roy, A. S. Turcot, P. Kitching, T. Nakano, M. Rozon, and R. Soluk, "Observation of the Decay $K^+ \rightarrow \pi^+ \mu^+ \mu^-$," *Physical Review Letters* 79, 4756 (1997).
- D. V. Ahluwalia, "Notes on the Kinematic Structure of the Three-Flavor Neutrino Oscillation Framework," *International Journal of Modern Physics A* 12, 5081 (1997).
- D. V. Ahluwalia, "On a New Non-Geometric Element in Gravity," *General Relativity and Gravitation* 29, 1491 (1997).
- D. V. Ahluwalia, "Three Quantum Aspects of Gravity," *Chinese Journal of Physics* 35, 804 (1997).
- D. V. Ahluwalia and T. Goldman, "Interplay of Nonrelativistic and Relativistic Effects in Neutrino Oscillations," *Physical Review D* 56, 1698 (1997).
- A. J. Allen, J. L. Terry, D. Garnier, J. A. Stillerman, and G. A. Wurden, "The High Resolution Video Capture System on the Alcator C-Mod Tokamak," *Review of Scientific Instruments* 68, 947 (1997).
- C. Athanassopoulos, L. B. Auerbach, D. Bauer, R. D. Bolton, R. L. Burman, I. Cohen, D. O. Caldwell, B. D. Dieterle, J. B. Donahue, A. M. Eisner, A. Fazely, F. J. Federspiel, G. T. Garvey, M. Gray, R. M. Gunasingha, V. Highland, R. Imlay, K. Johnston, H. J. Kim, W. C. Louis, A. Lu, J. Margulies, G. B. Mills, K. McIlhany, W. Metcalf, R. A. Reeder, V. Sandberg, M. Schillaci, D. Smith, I. Stancu, W. Strossman, R. Tayloe, G. J. VanDalen, W. Vernon, Y.-X. Wang, D. H. White, D. Whitehouse, D. Works, Y. Xiao, and S. Yellin, "The Liquid Scintillator Neutrino Detector and LAMPF Neutrino Source," *Nuclear Instruments and Methods in Physics Research* 388, 149 (1997).
- C. Athanassopoulos, L. B. Auerbach, R. L. Burman, D. O. Caldwell, E. Church, I. Cohen, B. D. Dieterle, J. B. Donahue, A. M. Eisner, A. Fazely, F. J. Federspiel, G. T. Garvey, M. Gray, R. M. Gunasingha, R. Imlay, K. Johnston, H. J. Kim, W. C. Louis, R. Majkic, K. McIlhany, W. Metcalf, G. B. Mills, R. A. Reeder, V. Sandberg, D. Smith, I. Stancu, W. Strossman, R. Tayloe, G. J. Van Dalen, W. Vernon, N. Wadia, J. Waltz, Y.-X. Wang, D. H. White, D. Works, Y. Xiao, and S. Yellin (LSND Collaboration), "Measurements of the Reactions $^{12}\text{C}(\nu_\mu, \mu^-)^{12}\text{N}_{\text{g.s.}}$ and $^{12}\text{C}(\nu_\mu, \mu^-)X$," *Physical Review C* 56, 2806 (1997).
- C. Athanassopoulos, L. B. Auerbach, R. L. Burman, I. Cohen, D. O. Caldwell, B. D. Dieterle, J. B. Donahue, A. M. Eisner, A. Fazely, F. J. Federspiel, G. T. Garvey, M. Gray, R. M. Gunasingha, R. Imlay, K. Johnston, H. J. Kim, W. C. Louis, R. Majkic, J. Margulies, K. McIlhany,

- W. Metcalf, G. B. Mills, R. A. Reeder, V. Sandberg, D. Smith, I. Stancu, W. Strossman, R. Tayloe, G. J. VanDalen, W. Vernon, N. Wadia, J. Waltz, Y.-X. Wang, D. H. White, D. Works, Y. Xiao, and S. Yellin (LSND Collaboration), "Measurements of the Reactions $^{12}\text{C}(\nu_e, e^-)^{12}\text{N}_{\text{g.s.}}$ and $^{12}\text{C}(\nu_e, e^-)^{12}\text{N}^*$," *Physical Review C* 55, 2078 (1997).
- C. H. Bagley and G. G. Luther, "Preliminary Results of a Determination of the Newtonian Constant of Gravitation: A Test of the Kuroda Hypothesis," *Physical Review Letters* 78, 3047 (1997).
- C. W. Barnes, "Neutron Activation Measurements over an Extremely Wide Dynamic Range (Invited)," *Review of Scientific Instruments* 68, 520 (1997).
- C. W. Barnes, M. J. Loughlin, and T. Nishitani, "Neutron Activation for ITER," *Review of Scientific Instruments* 68, 577 (1997).
- C. W. Barnes and A. L. Roquemore, "Neutron Source Strength Monitors for ITER," *Review of Scientific Instruments* 68, 573 (1997).
- P. D. Barnes, W. Breunlich, H. Dennert, R. A. Eisenstein, W. Eyrich, H. Fischer, G. Franklin, J. Franz, R. von Frankenberg, R. Geyer, N. Hamann, D. W. Hertzog, T. Johansson, K. Kilian, M. Kirsch, R. A. Kraft, W. Oelert, B. Quinn, K. Röhrich, E. Rössle, H. Schmitt, R. Schumacher, T. Sefzick, F. Stinzing, R. Tayloe, and R. Todenhagen (PS185 Collaboration), "Measurement of the Reactions $\bar{p}p \rightarrow \bar{\Sigma}^+ \Sigma^+$ and $\bar{p}p \rightarrow \bar{\Sigma}^- \Sigma^-$ Close to Threshold," *Physics Letters B* 402, 227 (1997).
- F. B. Bateman, S. M. Grimes, N. Boukharouba, V. Mishra, C. E. Brient, R. S. Pedroni, T. N. Massey, and R. C. Haight, "Determination of the ^{29}Si Level Density from 3 to 22 MeV," *Physical Review C* 55, 133 (1997).
- I. G. Bearden, H. Bøggild, J. Boissevain, J. Dodd, B. Erazmus, S. Esumi, C. W. Fabjan, D. Ferenc, D. E. Fields, A. Franz, J. J. Gaardhøje, A. G. Hansen, O. Hansen, D. Hardtke, H. van Hecke, E. B. Holzer, T. J. Humanic, P. Hummel, B. V. Jacak, R. Jayanti, H. Kalechofsky, M. Kaneta, M. Kopytine, Y. Y. Lee, M. Leltchouk, T. Ljubicic, B. Lörstad, N. Maeda, R. Malina, A. Medvedev, M. Murry, S. Nishimura, D. Reichhold, A. Sakaguchi, J. Simon-Gillo, J. Schmidt-Sørensen, W. Sondheim, M. Spegel, T. Sugitate, J. P. Sullivan, Y. Sumi, W. J. Willis, K. Wolf, N. Xu, and D. S. Zachary (NA44 Collaboration), "Collective Expansion in High Energy Heavy Ion Collisions," *Physical Review Letters* 78, 2080 (1997).
- M. G. Bell, S. Batha, M. Beer, R. E. Bell, A. Belov, H. Berk, S. Bernabei, M. Bitter, B. Breizman, N. L. Bretz, R. Budny, C. E. Bush, J. Callen, S. Cauffman, C. S. Chang, Z. Chang, C. Z. Cheng, D. S. Darrow, R. O. Dendy, W. Dorland, H. Duong, P. C. Efthimion, D. Ernst, H. Evenson, N. J. Fisch, R. Fisher, R. J. Fonck, E. D. Fredrickson, G. Y. Fu, H. P. Furth, N. N. Gorelenkov, V. Ya. Goloborod'ko, B. Grek,

L. R. Grisham, G. W. Hammett, R. J. Hawryluk, W. Heidbrink, H. W. Herrmann, M. C. Herrmann, K. W. Hill, J. Hogan, B. Hooper, J. C. Hosea, W. A. Houlberg, M. Hughes, D. L. Jassby, F. C. Jobes, D. W. Johnson, R. Kaita, S. Kaye, J. Kesner, J. S. Kim, M. Kissick, A. V. Krasilnikov, H. Kugel, A. Kumar, N. T. Lam, P. Lamarche, B. LeBlanc, F. M. Levinton, C. Ludescher, J. Machuzak, R. P. Majeski, J. Manickam, D. K. Mansfield, M. Mauel, E. Mazzucato, J. McChesney, D. C., McCune, G. McKee, K. M. McGuire, D. M. Meade, S. S. Medley, D. R. Mikkelsen, S. V. Mirnov, D. Mueller, Y. Nagayama, G. A. Navratil, R. Nazikian, M. Okabayashi, M. Osakabe, D. K. Owens, H. K. Park, W. Park, S. F. Paul, M. P. Petrov, C. K. Phillips, M. Phillips, P. Phillips, A. T. Ramsey, B. Rice, M. H. Redi, G. Rewoldt, S. Reznik, A. L. Roquemore, J. Rogers, E. Ruskov, S. A. Sabbagh, M. Sasao, G. Schilling, G. L. Schmidt, S. D. Scott, I. Semenov, T. Senko, C. H. Skinner, T. Stevenson, E. J. Strait, B. C. Stratton, J. D. Strachan, W. Stodiek, E. Synakowski, H. Takahashi, W. Tang, G. Taylor, M. E. Thompson, S. von Goeler, A. von Halle, R. T. Walters, S. Wang, R. White, R. M. Wieland, M. Williams, J. R. Wilson, K. L. Wong, G. A. Wurden, M. Yamada, V. Yavorski, K. M. Young, L. Zakharov, M. C. Zarnstorff, and S. J. Zweben, "Deuterium-Tritium Plasmas in Novel Regimes in the Tokamak Fusion Test Reactor," *Physics of Plasmas* 4, 1714 (1997).

V. M. Belyaev and M. B. Johnson, "Distribution of Valence Quarks and Light-Cone QCD Sum Rules," *Physical Review D* 56, 1481 (1997).

T. R. Boehly, D. L. Brown, R. S. Craxton, R. L. Keck, J. P. Knauer, J. H. Kelly, T. J. Kessler, S. A. Kumpan, S. J. Loucks, S. A. Letzring, F. J. Marshall, R. L. McCrory, S. F. B. Morse, W. Seka, J. M. Soures, and C. P. Verdon, "Initial Performance Results of the OMEGA Laser System," *Optics Communications* 133, 495 (1997).

P. Bogorad, E. J. Brash, G. D. Cates, W. J. Cummings, A. Gorelov, M. D. Hasinoff, O. Häusser, K. Hicks, R. Holmes, J. C. Huang, D. Krieger, K. S. Kumar, B. Larson, W. Lorenzon, J. McCracken, P. Michaux, H. Middleton, E. Saettler, D. Siegel, P. A. Souder, D. R. Swenson, J. Thywissen, D. Tupa, J. Ullom, X. Wang, and A. R. Young, "A Combined Polarized Target/Ionization Chamber for Measuring the Spin Dependence of Nuclear Muon Capture in Laser Polarized Muonic ^3He ," *Nuclear Instruments and Methods in Physics Research A* 398, 211 (1997).

E. Bosze, J. Simon-Gillo, J. Boishevain, J. Chang, and R. Seto, "Rohacell Foam as a Silicon Support Structure Material for the PHENIX Multiplicity Vertex Detector," *Nuclear Instruments and Methods in Physics Research A* 400, 224 (1997).

C. L. Britton, Jr., W. L. Bryan, M. S. Emery, M. N. Ericson, M. S. Musrock, M. L. Simpson, M. C. Smith, J. W. Walker, A. L. Wintenberg, G. R. Young, M. D. Allen, L. G. Clonts, R. L. Jones, E. J. Kennedy, R. S. Smith, J. Boishevain, B. V. Jacak, D. Jaffe,

J. S. Kapustinsky, J. Simon-Gillo, J. P. Sullivan, H. van Hecke, and N. Xu, "Design and Performance of Beam Test Electronics for the PHENIX Multiplicity Vertex Detector," *IEEE Transactions on Nuclear Science* 44, 283 (1997).

M. L. Brooks, D. M. Lee, and W. E. Sondheim, "Alignment System for the PHENIX Muon Tracking Chambers," *IEEE Transactions on Nuclear Science* 44, 683 (1997).

R. L. Burman and P. Plischke, "Neutrino Fluxes from a High-Intensity Spallation Neutron Facility," *Nuclear Instruments and Methods in Physics Research A* 398, 147 (1997).

A. M. Buyko, N. P. Bidylo, V. K. Chernyshev, V. A. Demidov, S. F. Garanin, V. N. Kostyukov, A. A. Kulagin, A. I. Kuzyaev, A. B. Mezhevov, V. N. Mokhov, E. S. Pavlovskiy, A. A. Patrukhin, V. B. Yakubov, B. T. Yegorychev, J. W. Canada, C. A. Edkahl, J. H. Goforth, J. C. King, I. R. Lindemuth, R. E. Reinovsky, P. Rodriguez, R. C. Smith, L. R. Veeser, and S. M. Younger, "Results of Russian/U.S. High-Performance DEMG Experiment," *IEEE Transactions on Plasma Science* 25, 145 (1997).

A. M. Buyko, O. M. Burenkov, V. K. Chernyshev, S. F. Garanin, S. D. Kuznetsov, A. I. Kuzyayev, V. N. Mokhov, I. V. Morozov, E. S. Pavlovskiy, A. A. Petrukhin, A. I. Startsev, V. B. Yakubov, B. G. Anderson, C. A. Edkahl, J. Kammerdiner, I. R. Lindemuth, R. E. Reinovsky, P. Rodriguez, P. J. Sheehey, L. R. Veeser, S. M. Younger, and B. Zerwekh, "Changing Mass Liner System for Generation of Soft X-Rays," *Laser and Particle Beams* 15, 133 (1997).

S. E. Caldwell, S. S. Han, J. R. Joseph, T. L. Petersen, and C. S. Young, "Burn History Measurements in Laser Based Fusion," *Review of Scientific Instruments* 68, 603 (1997).

G. H. Canavan, "Optimal Detection of Near-Earth Object Threats," *Annals of the New York Academy of Sciences* 822, 539 (1997).

A. Castro and J. G. K. Williams, "Single-Molecule Detection of Specific Nucleic Acid Sequences in Unamplified Genomic DNA," *Analytical Chemistry* 69, 3915 (1997).

A. V. Chernyshev, A. B. Krasulin, V. D. Laptev, V. A. Matveev, and M. D. Cooper, "A Method for Improving the Constraint on the Tensor Coupling Constant in Radiative Pion Decay," *Modern Physics Letters A* 12, 1669 (1997).

R. E. Chrien, K. A. Klare, and T. J. Murphy, "Measurements of Neutron Spectra from Nova Targets," *Review of Scientific Instruments* 68, 607 (1997).

- R. E. Chrien, K. A. Klare, T. J. Murphy, and L. A. Rauber, "Calibration and Operation of a Neutron Time-of-Flight Scintillator Array on Nova," *Fusion Engineering and Design* 34, 577 (1997).
- R. Clark, R. Becker-Szendy, C. B. Bratton, J. Breault, D. Casper, S. T. Dye, W. Gajewski, M. Goldhaber, T. J. Haines, P. G. Halverson, D. Kielczewska, W. R. Kropp, J. C. Learned, J. LoSecco, C. McGrew, S. Matsuno, R. S. Miller, L. Price, F. Reines, J. Schultz, H. W. Sobel, J. Stone, L. R. Sulak, R. Svoboda, and M. Vagins, "Atmospheric Muon Neutrino Fraction above 1 GeV," *Physical Review Letters* 79, 345 (1997).
- B. P. Cluggish, C. F. Driscoll, K. Avinash, and J. A. Helffrich, "Sawtooth Oscillations in a Damped/Driven Cryogenic Electron Plasma: Experiment and Theory," *Physics of Plasmas* 4, 2062 (1997).
- J. A. Cobble, R. P. Johnson, and R. J. Mason, "High-Intensity Illumination of an Exploding Foil," *Physics of Plasmas* 4, 3006 (1997).
- M. D. Cooper, " $\mu^+ \rightarrow e^+\gamma$ and Related Rare Decays," *Nuclear Physics B* S59, 209 (1997).
- H. A. Davis, R. R. Bartsch, J. C. Olson, D. J. Rej, and W. J. Waganaar, "Intense Ion Beam Optimization and Characterization with Infrared Imaging," *Journal of Applied Physics* 82, 3223 (1997).
- H. A. Davis, J. C. Olson, W. A. Reass, C. W. Barnes, R. R. Bartsch, D. M. Coates, J. W. Hunt, H. M. Schleinitz, R. H. Lovberg, and J. B. Greenly, "Progress toward a Microsecond Duration, Repetitively Pulsed, Intense-Ion Beam for Active Spectroscopic Measurements on ITER," *Review of Scientific Instruments* 68, 332 (1997).
- C. Decker, R. E. Turner, O. L. Landen, L. J. Suter, P. Amendt, H. N. Kornblum, B. A. Hammel, T. J. Murphy, J. Wallace, N. D. Delamater, P. Gobby, A. A. Hauer, G. R. Magelssen, J. A. Oertel, J. Knauer, F. J. Marshall, D. Bradley, W. Seka, and J. M. Soures, "Hohlraum Radiation Drive Measurements on the Omega Laser," *Physical Review Letters* 79, 1491 (1997).
- Z. Deng, I. Aksentijevich, J. E. Balow, T. Blake, M. Centola, X. Chen, F. S. Collins, N. Doggett, J. I. Rotter, M. Shohat, R. Sood, G. Wood, Y. Yokoyama, N. Zaks, D. L. Kastner, and P. Lise, "Identification of FMF Positional Candidate Genes within a 115-Kb Interval Defined by Historical Recombinants," *American Journal of Human Genetics* 61, 1356 (1997).
- R. C. Elton, H. R. Griem, B. L. Welch, A. L. Osterheld, R. C. Mancini, J. Knauer, G. Pien, R. G. Watt, J. A. Cobble, P. A. Jaanimagi, D. K. Bradley, J. A. Delettrez, and R. Epstein, "Satellite Spectral Lines in High Density Laser-Produced Plasmas," *Journal of Quantitative Spectroscopy and Radiative Transfer* 58, 559 (1997).

M. A. Espy, J. M. O'Donnell, B. Davis, D. Dehnhard, J. L. Langenbrunner, B. Larson, M. Palarczyk, C.-M. Riedel, K. Wick, S. Blanchard, G. R. Burleson, W. R. Gibbs, B. Lail, B. Nelson, B. K. Park, Q. Zhao, W. J. Cummings, P. P. J. Delheij, B. K. Jennings, O. Häusser, R. Henderson, D. Thiessen, E. Brash, M. K. Jones, B. Brinkmöller, K. Maeda, F. Merrill, C. L. Morris, S. Penttilä, D. Swenson, D. Tupa, C. Bennhold, and S. S. Kamalov, "Asymmetries for Elastic Scattering of π^\pm from Polarized ^3He at Δ Resonance Energies," *Physical Review C* 56, 2607 (1997).

S. Esumi, S. Chapman, H. van Hecke, and N. Xu, "Transverse Flow at Ultrarelativistic Energies," *Physical Review C* 55, R2163 (1997).

S. Esumi, U. Heinz, and N. Xu, "Collective Flow or Random Walk?" *Physics Letters B* 409, 479 (1997).

X. Feng, M. H. Holzscheiter, M. Charlton, J. Hangst, N. S. P. King, R. A. Lewis, J. Rochet, and Y. Yamazaki, "Capture and Cooling of Antiprotons," *Hyperfine Interactions* 109, 145 (1997).

J. C. Fernández, B. S. Bauer, K. S. Bradley, J. A. Cobble, R. G. Watt, B. Bezzrides, K. G. Estabrook, S. R. Goldman, D. B. Harris, E. L. Lindman, Jr., J. M. Wallace, and B. H. Wilde, "Increased Saturated Levels of Stimulated Brillouin Scattering of a Laser by Seeding a Plasma with an External Light Source," *Physical Review Letters* 81, 2252 (1997).

R. D. Fulton, J. C. Goldstein, M. E. Jones, J. M. Kinross-Wright, S. H. Kong, and D. C. Nguyen, "Enhanced Energy Loss of Short Pulses of Electrons in Plasma," *Journal of Applied Physics* 82, 2822 (1997).

R. Guckert, E. P. Chamberlin, D. W. Preston, V. D. Sandberg, D. Tupa, D. J. Vieira, H. Wollnik, and X. X. Zhao, "Coupling an Optical Trap to a Mass Separator," *Nuclear Instruments and Methods in Physics Research* 383, 126 (1997).

E. Hagberg, I. S. Towner, J. C. Hardy, V. T. Koslowsky, G. Savard, and S. Sterbenz, "Beta Decays of ^{44}V and ^{52}Co ," *Nuclear Physics A* 613, 183 (1997).

M. H. Holzscheiter, G. Bendiscioli, A. Bertin, G. Bollen, M. Bruschi, C. Cesar, M. Charlton, M. Corradini, D. DePedis, M. Doser, J. Eades, R. Fedele, X. Feng, F. Galluccio, T. Goldman, J. S. Hangst, R. Hayano, D. Horváth, R. J. Hughes, N. S. P. King, K. Kirsebom, H. Knudsen, V. Lagomarsino, R. Landua, G. Laricchia, R. A. Lewis, E. Lodi-Rizzini, M. Macri, G. Manuzio, U. Marconi, M. R. Masullo, J. P. Merrison, S. P. Möller, G. L. Morgan, M. M. Nieto, M. Piccinini, R. Poggiani, A. Rotondi, G. Rouleau, P. Salvini, N. Semprini-Cesari, G. A. Smith, C. M. Surko, G. Testera, G. Torelli, E. Uggerhøj, V. G. Vaccaro, L. Venturelli, A. Vitale, E. Widmann, T. Yamazaki, Y. Yamazaki,

- D. Zanello, and A. Zoccoli, "Antihydrogen Production and Precision Experiments," *Nuclear Physics B (S56A)*, 336 (1997).
- M. H. Holzscheiter, G. Bendiscioli, A. Bertin, G. Bollen, M. Bruschi, C. Cesar, M. Charlton, M. Corradini, D. DePedis, M. Doser, J. Eades, R. Fedele, X. Feng, F. Galluccio, T. Goldman, J. S. Hangst, R. Hayano, D. Horváth, R. J. Hughes, N. S. P. King, K. Kirsebom, H. Knudsen, V. Lagomarsino, R. Landua, G. Laricchia, R. A. Lewis, E. Lodi-Rizzini, M. Macri, G. Manuzio, U. Marconi, M. R. Masullo, J. P. Merrison, S. P. Møller, G. L. Morgan, M. M. Nieto, M. Piccinini, R. Poggiani, A. Rotondi, G. Rouleau, P. Salvini, N. Semprini-Cesari, G. A. Smith, C. M. Surko, G. Testera, G. Torelli, E. Uggerhøj, V. G. Vaccaro, L. Venturelli, A. Vitale, E. Widmann, T. Yamazaki, Y. Yamazaki, D. Zanello, and A. Zoccoli, "Antihydrogen Production and Precision Experiments: The ATHENA Collaboration," *Hyperfine Interactions* 109, 1 (1997).
- W.-C. Hsi, K. Kwiatkowski, G. Wang, D. S. Bracken, E. Cornell, D. S. Ginger, V. E. Viola, N. R. Yoder, R. G. Korteling, F. Gimeno-Noguera, E. Ramakrishnan, D. Rowland, S. J. Yennello, M. J. Huang, W. G. Lynch, M. B. Tsang, H. Xi, Y. Y. Chu, S. Gushue, L. P. Remsberg, K. B. Morley, and H. Breuer, "Formation of Hot Nuclei with GeV π and π^- Beams," *Physical Review Letters* 79, 817 (1997).
- P. R. Huffman, N. R. Roberson, W. S. Wilburn, C. R. Gould, D. G. Haase, C. D. Keith, B. W. Raichle, M. L. Seely, and J. R. Walston, "Test of Parity-Conserving, Time-Reversal Invariance using Polarized Neutrons and Nuclear Spin Aligned Holmium," *Physical Review C* 55, 2684 (1997).
- R. J. Hughes, "Quantum Security is Spookily Certain," *Nature* 385, 17 (1997).
- D. Husson, C. Bauer, I. Baumann, C. Colledani, J. Conway, P. Delpierre, F. Djama, W. Dulinski, M. Edwards, A. Fallou, K. K. Gan, R. S. Gilmore, E. Grigoriev, G. Halewell, S. Han, T. Hessing, J. Hrubec, H. Kagan, D. Kania, R. Kass, K. T. Knoepfle, M. Krammer, T. J. Llewellyn, P. F. Manfredi, D. Meier, L. S. Pan, H. Pernegger, M. Pernicka, V. Re, S. Roe, D. Roff, A. Rudge, S. Schnetzer, V. Speziali, R. Stone, R. J. Tapper, R. Tesarek, W. Trischuk, R. Turchetta, G. B. Thomson, P. Weilhammer, H. Ziock, and M. Zoeller, "Neutron-Irradiation of CVD-Diamond Samples for Tracking Detectors," *Nuclear Instruments and Methods in Physics Research* 388, 421 (1997).
- C. G. Idzorek and H. Oona, "Properties of Plasma Radiation Diagnostics," *Review of Scientific Instruments* 68, 1065 (1997).
- B. H. Jared, T. A. Dow, K. P. Garrard, G. M. Moorefield, C. Barnes, R. D. Day, D. J. Hatch, L. J. Salzer, and G. Rivera, "Fabrication of Hydrodynamic Instability Targets," *Fusion Technology* 31, 501 (1997).

L. C. Johnson, C. W. Barnes, A. Krasilnikov, F. B. Marcus, and T. Nishitani, "Neutron Diagnostics for ITER," *Review of Scientific Instruments* 68, 569 (1997).

G. Kahrimanis, G. Burleson, C. M. Chen, B. C. Clark, K. Dhuga, D. J. Ernst, J. A. Faucett, H. T. Fortune, S. Hama, A. Hussein, M. F. Jiang, K. W. Johnson, L. K. Kerr, S. Mathews, J. McGill, C. F. Moore, S. Mordechai, C. L. Morris, J. O'Donnell, M. Snell, M. Rawool-Sullivan, L. Ray, C. Whitley, and A. L. Williams, "Pion-Nucleus Elastic Scattering on ^{12}C , ^{40}Ca , ^{90}Zr , and ^{208}Pb at 400 and 500 MeV," *Physical Review C* 55, 2533 (1997).

K. Kaimi, H. Bøggild, J. Boissevain, M. Cherney, J. Dodd, S. Esumi, C. W. Fabjan, D. E. Fields, A. Franz, B. Holzer, T. J. Humanic, B. Jacak, R. Jayanti, H. Kalechofsky, T. Kobayashi, Y. Y. Lee, M. Leltchouk, B. Lörstad, N. Maeda, A. Medvedev, A. Miyabayashi, M. Murray, S. Nishimura, E. Noteboom, S. U. Pandey, F. Piuz, V. Polychronakos, M. Potekhin, G. Pouillard, A. Sakaguchi, J. Schmidt-Sørensen, J. Simon-Gillo, W. Sondheim, T. Sugitate, J. P. Sullivan, Y. Sumi, H. van Hecke, W. J. Willis, K. Wolf, and N. Xu, "Multiplicity Dependence of the Pion Source in S + A Collisions at the CERN SPS," *Zeitschrift für Physik C* 75, 619 (1997).

J. Kapustinsky, J. Boissevain, E. Bosze, C. Britton, J. Chang, D. Clark, M. Emery, N. Ericson, S. Y. Fung, B. Jacak, D. Jaffe, L. Marek, R. Seto, J. Simon-Gillo, M. Simpson, R. Smith, J. Sullivan, Y. Takahashi, H. van Hecke, J. Walker, and N. Xu, "A Multiplicity-Vertex Detector for the PHENIX Experiment at RHIC," *Nuclear Instruments and Methods in Physics Research A* 392, 192 (1997).

V. V. Ketlerov, A. A. Goverdovski, V. A. Khryachkov, V. F. Mitrofanov, Y. B. Ostapenko, R. C. Haight, P. E. Koehler, S. M. Grimes, and R. S. Smith, "Detailed Study of Double-Differential Cross-Sections for the $^{17}\text{O}(n,\alpha)^{14}\text{C}$ Reaction," *Nuclear Physics A* 621, C243 (1997).

P. Kitching, T. Nakano, M. Rozon, R. Soluk, S. Adler, M. S. Atiya, I.-H. Chiang, J. S. Frank, J. S. Haggerty, T. F. Kycia, K. K. Li, L. S. Littenberg, A. Sambamurti, A. Stevens, R. C. Strand, C. Witzig, W. C. Louis, D. S. Akerib, M. Ardebili, M. Convery, M. M. Ito, D. R. Marlow, R. A. McPherson, P. D. Meyers, M. A. Selen, F. C. Shoemaker, A. J. S. Smith, E. W. Blackmore, D. A. Bryman, L. Felawka, A. Konaka, Y. Kuno, J. A. MacDonald, T. Numao, P. Padley, J.-M. Poutissou, R. Poutissou, J. Roy, and A. S. Turcot, "Observation of the Decay $K^+ \rightarrow \pi^+ \gamma\gamma$," *Physical Review Letters* 79, 4079 (1997).

P. G. Kwiat, "Hyper-Entangled States," *Journal of Modern Optics* 44, 2173 (1997).

- G. A. Kyrala, S. Evans, J. Jimerson, and J. C. Fernández, "Time Resolved Side Scatter Diagnostics at NOVA," *Review of Scientific Instruments* 68, 664 (1997).
- S. K. Lamoreaux, "Demonstration of the Casimir Force in the 0.6 to 6 μm Range," *Physical Review Letters* 78, 5 (1997).
- S. K. Lamoreaux, "Thermalization of Trapped Ions: A Quantum Perturbation Approach," *Physical Review A* 56, 4970 (1997).
- S. K. Lamoreaux and V. K. Ignatovich, "Tidal Pressure Induced Neutrino Emission as an Energy Dissipation Mechanism in Binary Pulsar Systems," *Journal of the Physical Society of Japan* 66, 1225 (1997).
- R. J. Leeper, G. A. Chandler, G. W. Cooper, M. S. Derzon, D. L. Fehl, D. E. Hebron, A. R. Moats, D. D. Noack, J. L. Porter, L. E. Ruggles, C. L. Ruiz, J. A. Torres, M. D. Cable, P. M. Bell, C. A. Clower, B. A. Hammel, D. H. Kalantar, V. P. Karpenko, R. L. Kauffman, J. D. Kilkenny, F. D. Lee, R. A. Lerche, B. J. MacGowan, M. J. Moran, M. B. Nelson, W. Olson, T. J. Orzechowski, T. W. Phillips, D. Ress, G. L. Tietbohl, J. E. Trebes, R. J. Bartlett, R. Berggren, S. E. Caldwell, R. E. Chrien, B. H. Failor, J. C. Fernández, A. Hauer, G. Idzorek, R. G. Hockaday, T. J. Murphy, J. Oertel, R. Watt, M. Wilke, D. K. Bradley, J. Knauer, R. D. Petrasso, and C. K. Li, "Target Diagnostic System for the National Ignition Facility (Invited)," *Review of Scientific Instruments* 68, 868 (1997).
- M. Lo Vetere, L. Bertolotto, A. Buzzo, P. Debevec, D. Drijard, S. Easo, R. A. Eisenstein, C. Evangelista, W. Eyrich, T. Fearnley, M. Ferroluzzi, H. Fischer, J. Franz, R. Geyer, N. H. Hamann, P. G. Harris, D. W. Hertzog, S. A. Hughes, A. Johansson, T. Johansson, R. T. Jones, K. Kilian, K. Kirsebom, A. Klett, H. Korsmo, M. Macri, M. Marinelli, M. Moosburger, B. Mouellic, W. Oelert, S. Ohlsson, A. Palano, S. Passaggio, J.-M. Perreau, M. G. Pia, S. Pomp, M. Price, P. E. Reimer, J. Ritter, E. Robutti, K. Röhrich, M. Rook, T. Sefzick, E. Rössle, A. Santroni, H. Schmitt, O. Steinkamp, F. Stinzing, B. Stugu, R. Tayloe, M. Tscheulin, H. J. Urban, H. Wirth, and H. Zipse, "Phi-Phi Excitation-Function at LEAR," *Nuclear Physics B (S56A)*, 256 (1997).
- L. Y. Lowie, J. D. Bowman, B. E. Crawford, P. P. J. Delheij, T. Haseyama, J. N. Knudson, A. Masaike, Y. Matsuda, G. E. Mitchell, S. I. Penttilä, H. Postma, N. R. Roberson, S. J. Seestrom, E. I. Sharapov, S. L. Stephenson, Y.-F. Yen, and V. W. Yuan, "Neutron Resonance Spectroscopy of ^{107}Ag and ^{109}Ag ," *Physical Review C* 56, 90 (1997).
- R. J. Maqueda, C. W. Barnes, S. S. Han, P. A. Staples, and R. S. Wagner, "Proton Recoil Detector of Fusion Neutrons using Natural Diamond," *Review of Scientific Instruments* 68, 624 (1997).

- D. N. McKinsey, C. R. Brome, J. S. Butterworth, R. Golub, K. Habicht, P. R. Huffman, S. K. Lamoreaux, C. E. H. Mattoni, and J. M. Doyle, "Fluorescence Efficiencies of Thin Scintillating Films in the Extreme Ultraviolet Spectral Region," *Nuclear Instruments and Methods in Physics Research B* 13, 351 (1997).
- A. McPherson, J. Cobble, A. B. Borisov, B. D. Thompson, F. Omenetto, K. Boyer, and C. K. Rhodes, "Evidence of Enhanced Multiphoton (248 nm) Coupling from Single-Pulse Energy Measurements of Xe(L) Emission Induced from Xe Clusters," *Journal of Physics B* 13, L767 (1997).
- W. Melnitchouk and J.-C. Peng, "Large- x d/u Ratio in W -Boson Production," *Physics Letters B* 400, 220 (1997).
- T. B. Mitchell, M. M. Schauer, and D. C. Barnes, "Observation of Spherical Focus in an Electron Penning Trap," *Physical Review Letters* 78, 58 (1997).
- D. V. Morgan, M. Sagurton, and R. J. Bartlett, "Single-Photon Multiple Ionization of Neon in the K -Edge Region," *Physical Review A* 55, 1113 (1997).
- J. C. Mosher, E. R. Flynn, A. Quinn, A. Weir, U. Shahani, R. J. P. Bain, P. Maas, and G. B. Donaldson, "Fetal Magnetocardiography: Methods for Rapid Data Reduction," *Review of Scientific Instruments* 68, 1587 (1997).
- T. J. Murphy, R. E. Chrien, and K. A. Klare, "Interpretation of Neutron Time-of-Flight Signals from Current-Mode Detectors," *Review of Scientific Instruments* 68, 610 (1997).
- T. J. Murphy, R. E. Chrien, and K. A. Klare, "Neutron Time-of-Flight Signals from Expanding or Contracting Spherical Sources," *Review of Scientific Instruments* 68, 614 (1997).
- T. Nishitani, M. Isobe, G. A. Wurden, R. E. Chrien, H. Harano, K. Tobita, and Y. Kusama, "Triton Burnup Measurements using Scintillating Fiber Detectors on JT-60U," *Fusion Engineering and Design* 34–35, 563 (1997).
- A. W. Obst, R. E. Chrien, and M. D. Wilke, "Colliding Plasma Neutron Production at Trident," *Review of Scientific Instruments* 68, 618 (1997).
- J. A. Oertel, T. Archuleta, C. G. Peterson, and F. J. Marshall, "Dual Microchannel Plate Module for a Gated Monochromatic X-Ray Imager," *Review of Scientific Instruments* 68, 789 (1997).
- J. A. Oertel and C. G. Peterson, "Los Alamos Pinhole Camera (LAPC): A New Flexible X-Ray Pinhole Camera," *Review of Scientific Instruments* 68, 786 (1997).

- B. G. Ofenloch, R. A. Giannelli, B. G. Ritchie, J. M. O'Donnell, J. N. Knudson, C. L. Morris, C. M. Kormanyos, A. Saunders, J. Z. Williams, R. A. Lindgren, and B. L. Clausen, "Pion-Nucleus Spin-Flip Strength at Low and Resonance Energies," *Physical Review C* 55, 1295 (1997).
- H. Ohnishi, I. G. Bearden, H. Bøggild, J. Bossevain, J. Dodd, B. Erazmus, S. Esumi, C. W. Fabjan, D. Ferenc, D. E. Fields, A. Franz, J. J. Gaardhøje, A. G. Hansen, O. Hansen, D. Hardtke, H. Vanhecke, E. B. Holzzer, T. J. Humanic, P. Hummel, B. V. Jacak, R. Jayanti, M. Kaneta, M. Kopytine, M. Leltchouk, A. Ljubicic, B. Lörstad, N. Maeda, R. Malina, A. Medvedev, M. Murray, S. Nishimura, H. Ohnishi, G. Paic, S. U. Pandey, F. Piuz, J. Pluta, V. Polychronakos, M. Potekhin, G. Pouillard, D. Reichhold, A. Sakaguchi, J. Simon-Gillo, J. Schmidt-Sørensen, W. Sondheim, M. Spegel, T. Sugitate, J. P. Sullivan, Y. Sumi, W. J. Willis, K. Wolf, N. Xu, and D. S. Zachary, "Multiplicity Dependence of Pion Source Size in Heavy-Ion Collisions," *Progress of Theoretical Physics Supplement* 129, 161 (1997).
- W. M. Parsons, E. O. Ballard, R. R. Bartsch, J. F. Benage, G. A. Bennett, R. L. Bowers, D. W. Bowman, J. H. Brownell, J. C. Cochrane, H. A. Davis, C. A. Ekdahl, R. F. Gribble, J. R. Griego, P. D. Goldstone, M. E. Jones, W. B. Hinckley, K. W. Hosack, R. J. Kasik, H. Lee, E. A. Lopez, I. R. Lindemuth, M. D. Monroe, R. W. Moses, Jr., S. A. Ney, D. Platts, W. A. Reass, H. R. Salazar, G. M. Sandoval, D. W. Scudder, J. S. Shlachter, M. C. Thompson, R. J. Trainor, G. A. Valdez, R. G. Watt, G. A. Wurden, and S. M. Younger, "The Atlas Project—A New Pulsed-Power Facility for High Energy Density Physics Experiments," *IEEE Transactions on Plasma Science* 25, 205 (1997).
- E. A. Pasyuk, V. Y. Alexakhin, S. I. Gogolev, K. O. Oganesyan, C. L. Morris, J. M. O'Donnell, M. W. Rawool-Sullivan, M. K. Jones, F. F. Guber, A. I. Reshetin, and I. I. Strakovsky, " $\pi^+ + d \rightarrow p + p$ Reaction between 18 and 44 MeV," *Physical Review C* 55, 1026 (1997).
- P. K. Patel, J. S. Wark, D. J. Heading, A. Djaoui, S. J. Rose, O. Renner, and A. Hauer, "Simulation of X-Ray Line Transfer in a Cylindrically Expanding Plasma," *Journal of Quantitative Spectroscopy and Radiative Transfer* 57, 683 (1997).
- P. K. Patel, J. S. Wark, O. Renner, A. Djaoui, S. J. Rose, D. J. Heading, and A. Hauer, "Experimental and Simulated Profiles of the Al XIII Ly- α Resonance Line from a Cylindrically Expanding Plasma," *Journal of Quantitative Spectroscopy and Radiative Transfer* 58, 835 (1997).
- J.-C. Peng and G. T. Garvey, "Drell-Yan Process and the Sea Quark Distributions," *Chinese Journal of Physics* 35, 832 (1997).

- J. W. Phillips, R. M. Leahy, and J. C. Mosher, "MEG-Based Imaging of Focal Neuronal Current Sources," *IEEE Transactions on Medical Imaging* 16, 338 (1997).
- J. W. Phillips, R. M. Leahy, J. C. Mosher, and B. Timsari, "Imaging Neural Activity using MEG and EEG," *IEEE Engineering in Medicine and Biology* 16, 34 (1997).
- D. J. Rej, H. A. Davis, M. Nastasi, J. C. Olson, E. J. Peterson, R. D. Reiswig, K. C. Walter, R. W. Stinnett, G. E. Remnev, and V. K. Struts, "Surface Modification of AISI-4620 Steel with Intense Pulsed Ion Beams," *Nuclear Instruments and Methods in Physics Research B* 127, 987 (1997).
- D. J. Rej, H. A. Davis, J. C. Olson, G. E. Remnev, A. N. Zakoutaev, V. A. Ryzhkov, V. K. Struts, I. F. Isakov, V. A. Shulov, N. A. Nochevnaya, R. Stinnett, E. L. Neau, K. Yatsui, and W. Jiang, "Materials Processing with Intense Pulsed Ion Beams," *Journal of Vacuum Science and Technology A* 15, 1089 (1997).
- D. J. Rej, R. J. Faehl, and J. N. Matossian, "Key Issues in Plasma-Source Ion Implantation," *Surface and Coatings Technology* 96, 45 (1997).
- H. Sarafian, M. A. Kagarlis, and M. B. Johnson, "Klein-Gordon Equation in a Coupled-Channels Description of Elastic and Inelastic Scattering," *Physical Review C* 56, 1500 (1997).
- M. Sasao, G. A. Wurden, and D. K. Mansfield, "Spectroscopic Measurement of the Doppler Broadening Region of He II Line Emission of DT Plasmas using Impurity Pellets," *Fusion Engineering and Design* 34–35, 333 (1997).
- M. M. Schauer, T. B. Mitchell, M. H. Holzscheiter, and D. C. Barnes, "Electron Penning Trap for the Generation of High Density Non-Neutral Plasmas," *Review of Scientific Instruments* 68, 3340 (1997).
- J. T. Scheuer, K. C. Walter, R. A. Adler, and W. G. Horne, "Commercial Plasma Source Ion Implantation Facility," *Surface and Coatings Technology* 93, 192 (1997).
- I. Schlichting and J. Berendzen, "Out of the Blue: The Photocycle of the Photoactive Yellow Protein," *Structure* 5, 735 (1997).
- I. Schlichting, J. Berendzen, K. Chu, A. M. Stock, R. M. Sweet, D. Ringe, G. A. Petsko, M. Davies, E. J. Mueller, D. Benson, and S. Sligar, "Crystal-Structures of Intermediates Occurring along the Reaction Pathway of Cytochrome P450(CAM)," *FASEB Journal* 11, P2 (1997).

D. M. Schmidt, J. S. George, S. I. Penttilä, A. Caprihan, and E. Fukushima, "Diffusion Imaging with Hyperpolarized ^3He Gas," *Journal of Magnetic Resonance* 129, 184 (1997).

G. S. Selwyn, C. A. Weiss, F. Sequeda, and C. Huang, "Particle Contamination Formation in Magnetron Sputtering Processes," *Vacuum Science and Technology A* 15, 2023 (1997).

A. P. Serebrov, V. A. Mityukhlyayev, A. A. Zakharov, T. Bowles, G. Greene, and J. Sromicki, "Solid Deuterium Source of Ultracold Neutrons based on a Pulsed Spallation Source," *JETP Letters* 66, 802 (1997).

C. H. Skinner, E. Amarescu, G. Ascione, W. Blanchard, C. W. Barnes, S. H. Batha, M. Beer, M. G. Bell, R. Bell, M. Bitter, N. L. Bretz, R. Budny, C. E. Bush, R. Camp, M. Casey, J. Collins, M. Cropper, Z. Chang, D. S. Darrow, H. H. Duong, R. Durst, P. C. Efthimion, D. Ernst, N. Fisch, R. J. Fonck, E. Fredrickson, G. Y. Fu, H. P. Furth, C. A. Gentile, M. Gibson, J. Gilbert, B. Grek, L. R. Grisham, G. Hammett, R. J. Hawryluk, H. W. Herrmann, K. W. Hill, J. Hosea, A. Janos, D. L. Jassby, F. C. Jobes, D. W. Johnson, L. C. Johnson, J. Kamperschroer, M. Kalish, H. Kugel, J. Langford, S. Langish, P. H. LaMarche, B. LeBlanc, F. M. Levinton, J. Machuzak, R. Majeski, J. Manikam, D. K. Mansfield, E. Mazzucato, K. M. McGuire, R. Mika, G. McKee, D. M. Meade, S. S. Medley, D. R. Mikkelsen, H. E. Mynick, D. Mueller, A. Nagy, R. Nazikian, M. Ono, D. K. Owens, H. Park, S. F. Paul, G. Pearson, M. Petrov, C. K. Phillips, S. Raftopoulos, A. Ramsey, R. Raucci, M. H. Redi, G. Rewoldt, J. Rogers, A. L. Roquemore, E. Ruskov, S. A. Sabbagh, G. Schilling, J. F. Schivell, G. L. Schmidt, S. D. Scott, S. Sesnic, B. C. Stratton, J. D. Strachan, T. Stevenson, D. P. Stotler, E. Synakowski, H. Takahashi, W. Tang, G. Taylor, W. Tighe, J. R. Timberlake, A. von Halle, S. von Goeler, R. T. Walters, R. B. White, J. R. Wilson, J. Winston, K. L. Wong, K. M. Young, M. C. Zarnstorff, and S. J. Zweben, "Plasma Wall Interaction and Tritium Retention in TFTR," *Journal of Nuclear Materials* 241, 214 (1997).

R. S. Smith, E. J. Kennedy, R. G. Jackson, M. L. Simpson, C. L. Britton, Jr., W. L. Bryan, U. Jagadish, G. R. Young, B. V. Jacak, J. Kapustinsky, and A. Oscarson, "A Discriminator with a Current-Sum Multiplicity Output for the PHENIX Multiplicity Vertex Detector," *IEEE Transactions on Nuclear Science* 44, 389 (1997).

J. A. Stillerman, T. W. Fredian, K. A. Klare, and G. Manduchi, "MDSplus Data Acquisition System," *Review of Scientific Instruments* 68, 939 (1997).

R. W. Stotzer, T. Bürger, P. D. Barnes, B. Bassalleck, A. R. Berdoz, M. Burger, R. E. Chrien, C. A. Davis, G. E. Diebold, H. En'yo, H. Fischer, G. B. Franklin, J. Franz, L. Gan, D. R. Gill, T. Iijima, K. Imai, P. Koran, M. Landry, L. Lee, J. Lowe, R. Magahiz, A. Masaike, R. McCrady,

F. Merrill, C. A. Meyer, J. M. Nelson, K. Okada, S. A. Page, P. H. Pile, B. P. Quinn, W. D. Ramsay, E. Rössle, A. Rusek, R. Sawafta, H. Schmitt, R. A. Schumacher, R. L. Stearns, I. R. Sukaton, R. Sutter, J. J. Szymanski, F. Takeutchi, W. T. H. van Oers, D. M. Wolfe, K. Yamamoto, M. Yosoi, V. J. Zeps, and R. Zybert (BNL E836 Collaboration), "Search for the H -Dibaryon in ${}^3\text{He}(K^-, K^+)Hn$," *Physical Review Letters* 78, 3646 (1997).

J. D. Strachan, S. Batha, M. Beer, M. G. Bell, R. E. Bell, A. Belov, H. Berk, S. Bernabei, M. Bitter, B. Breizman, N. L. Bretz, R. Budny, C. E. Bush, J. Callen, S. Cauffman, C. S. Chang, Z. Chang, C. Z. Cheng, D. S. Darrow, R. O. Dendy, W. Dorland, H. Duong, P. C. Efthimion, D. Ernst, H. Evenson, N. J. Fisch, R. Fisher, R. J. Fonck, E. D. Fredrickson, G. Y. Fu, H. P. Furth, N. N. Gorelenkov, V. Y. Goloborod'ko, B. Grek, L. R. Grisham, G. W. Hammett, R. J. Hawryluk, W. Heidbrink, H. W. Herrmann, M. C. Herrmann, K. W. Hill, J. Hogan, B. Hooper, J. C. Hosea, W. A. Houlberg, M. Hughes, D. L. Jassby, F. C. Jobes, D. W. Johnson, R. Kaita, S. Kaye, J. Kesner, J. S. Kim, M. Kissick, A. V. Krasilnikov, H. Kugel, A. Kumar, N. T. Lam, P. Lamarche, B. LeBlanc, R. M. Levinton, C. Ludescher, J. Machuzak, R. P. Majeski, J. Manickam, D. K. Mansfield, M. Mauel, E. Mazzucato, J. McChesney, D. C. McCune, G. McKee, K. M. McGuire, D. M. Meade, S. S. Medley, D. R. Mikkelsen, S. V. Mirnov, D. Mueller, Y. Nagayama, G. A. Navratil, R. Nazikian, M. Okabayashi, M. Osakabe, D. K. Owens, H. K. Park, W. Park, S. F. Paul, M. P. Petrov, C. K. Phillips, M. Phillips, P. Phillips, A. T. Ramsey, B. Rice, M. H. Redi, G. Rewoldt, S. Reznik, A. L. Roquemore, J. Rogers, E. Ruskov, S. A. Sabbagh, M. Sasao, G. Schilling, G. L. Schmidt, S. D. Scott, I. Semenov, T. Senko, C. H. Skinner, T. Stevenson, E. J. Strait, B. C. Stratton, W. Stodiek, E. Synakowski, H. Takahashi, W. Tang, G. Taylor, M. E. Thompson, S. von Goeler, A. von Halle, R. T. Walters, S. Wang, R. White, R. M. Wieland, M. Williams, J. R. Wilson, K. L. Wong, G. A. Wurden, M. Yamada, V. Yavorski, K. M. Young, L. Zakharov, M. C. Zarnstorff, and S. J. Zweben, "TFTR DT Experiments," *Plasma Physics and Controlled Fusion* 39, B103 (1997).

S. Supek and C. J. Aine, "Spatiotemporal Modeling of Neuromagnetic Data. 1. Multisource Location versus Time-Course Estimation Accuracy," *Human Brain Mapping* 5, 139 (1997).

S. Supek and C. J. Aine, "Spatiotemporal Modeling of Neuromagnetic Data. 2. Multisource Resolvability of a MUSIC-Based Location Estimator," *Human Brain Mapping* 5, 154 (1997).

T. N. Taddeucci, J. Ullmann, L. J. Rybarcyk, G. W. Butler, and T. E. Ward, "Total Cross Sections for Production of ${}^7\text{Be}$, ${}^{22}\text{Na}$, and ${}^{24}\text{Na}$ in $p + {}^7\text{Li}$ and $p + {}^{27}\text{Al}$ reactions at 495 and 795 MeV," *Physical Review C* 55, 1551 (1997).

T. C. Terwilliger and J. Berendzen, "Bayesian Correlated MAD Phasing," *Acta Crystallographica D* 53, 571 (1997).

- Y. Tosaka, S. Satoh, K. Suzuki, T. Sugii, N. Nakayama, H. Ehara, G. A. Woffinden, and S. A. Wender, "Measurements and Analysis of Neutron-Reaction-Induced Charges in a Silicon Surface Region," *IEEE Transactions On Nuclear Science* 44, 173 (1997).
- M. Tuszewski, "Inductive Electron Heating Revisited," *Physics of Plasmas* 4, 1922 (1997).
- M. Tuszewski, J. T. Scheuer, and R. A. Adler, "A Pulsed Inductively Coupled Plasma Source for Plasma-Based Ion Implantation," *Surface and Coatings Technology* 93, 203 (1997).
- H. Vonach, A. Pavlik, A. Wallner, M. Drosig, R. C. Haight, D. M. Drake, and S. Chiba, "Spallation Reactions in ^{27}Al and ^{56}Fe Induced by 800 MeV Protons," *Physical Review C* 55, 2458 (1997).
- K. C. Walter, M. Nastasi, and C. Munson, "Adherent Diamond-Like Carbon Coatings on Metals via Plasma Source Ion Implantation," *Surface and Coatings Technology* 93, 287 (1997).
- G. Wang, A. Botvina, D. S. Bracken, E. Renshaw Foxford, W. A. Friedman, R. G. Korteling, K. Kwiatkowski, R. Legrain, K. B. Morley, E. C. Pollacco, V. E. Viola, and C. Volant, "Time Dependence of Multifragmentation in Light-Ion-Induced Reactions," *Physics Letters B* 393, 270 (1997).
- J. S. Wark, S. J. Rose, P. K. Patel, A. Djaoui, O. Renner, and A. Hauer, "Astrophysically Relevant Experiments on Radiation Transfer through Plasmas with Large Velocity Gradients," *Physics of Plasmas* 4, 2004 (1997).
- R. G. Watt, D. C. Wilson, R. E. Chrien, R. V. Hollis, P. L. Gobby, R. J. Mason, R. A. Kopp, R. Lerche, D. H. Kalantar, B. MacGowan, M. B. Nelson, T. Phillips, P. W. McKenty, and O. Willi, "Foam-Buffered Spherical Implosions at 527 nm," *Physics of Plasmas* 4, 1379 (1997).
- W. S. Wilburn, "A High-Accuracy Beam Current Integrator for Fast Spin-Flip Experiments," *Nuclear Instruments and Methods in Physics Research A* 394, 257 (1997).
- M. D. Wilke, J. C. Fernández, R. R. Berggren, R. F. Horton, D. S. Montgomery, J. A. Faulkner, L. D. Looney, and J. R. Jimerson, "Full Aperture Backscatter Station Imager Diagnostics System for Far-Field Imaging of Laser Plasma Instabilities on NOVA," *Review of Scientific Instruments* 68, 672 (1997).
- G. A. Wurden, "A Radiation-Hard, Steady State, Digital Imaging Bolometer System," *Fusion Engineering and Design* 34–35, 301 (1997).

- G. A. Wurden, B. J. Peterson, and S. Sudo, "Design of an Imaging Bolometer System for the Large Helical Device," *Review of Scientific Instruments* 68, 766 (1997).
- Y.-F. Yen, J. D. Bowman, L. Y. Lowie, Y. Masuda, G. E. Mitchell, and S. I. Penttilä, "Determination of the Gamma-Ray Background in a Pulsed Epithermal Neutron Beam," *Nuclear Instruments and Methods in Physics Research A* 397, 365 (1997).
- J. Zhang, K. Kwiatkowski, D. Bonser, M. Fatyga, S. D. Coon, K. Stith, V. E. Viola, L. W. Woo, and S. J. Yennello, "Complex Fragment Emission in the 200-MeV $^4\text{He} + ^{\text{nat}}\text{Ag}$, ^{197}Au Reactions," *Physics Review C* 56, 1918 (1997).
- X. M. Zhao, M. S. Gulley, H. C. Bryant, C. E. M. Strauss, D. J. Funk, A. Stintz, D. C. Rislove, G. A. Kyrala, W. B. Ingalls, and W. A. Miller, "Nonresonant Excess Photon Detachment of Negative Hydrogen Ions," *Physical Review Letters* 78, 1656 (1997).
- M. M. Zoeller, W. Adam, C. Bauer, I. Baumann, C. Colledani, J. Conway, P. Delpierre, F. Djama, W. Dulinski, A. Fallou, D. Fish, K. K. Gan, E. Grigoriev, Kass, K. T. Knöpfle, M. Krammer, P. F. Manfredi, D. Meier, L. S. Pan, H. Pernegger, M. Pernicka, V. Re, S. Roe, D. Roff, A. Rudge, M. Schaeffer, S. Schnetzer, V. Speziali, R. Stone, R. J. Tapper, R. Tesarek, G. B. Thomson, W. Trischuk, R. Turchetta, A. M. Walsh, P. Weilhammer, and H. Ziock, "Performance of CVD Diamond Microstrip Detectors under Particle Irradiation," *IEEE Transactions on Nuclear Science* 44, 815 (1997).

1998 Journal Articles

- W. P. Abfalterer, F. B. Bateman, F. S. Dietrich, C. Elster, R. W. Finlay, W. Glockle, J. Golak, R. C. Haight, D. Huber, G. L. Morgan, and H. Witala, "Inadequacies of the Nonrelativistic $3n$ Hamiltonian in Describing the N + D Total Cross-Section," *Physical Review Letters* 81, 57 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Angular Multiplicity Fluctuations in Hadronic Z-Decays and Comparison to QCD Models and Analytical Calculations," *Physics Letters B* 428, 186 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Determination of the Number of Light Neutrino Species from Single-Photon Production at LEP," *Physics Letters B* 431, 199 (1998).

- M. Acciarri, *et al.* (L3 Collaboration), “ K_s^0 Production and λ Production in Quark and Gluon Jets at LEP,” *Physics Letters B* 427, 409 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Local Multiplicity Fluctuations in Hadronic Z-Decay,” *Physics Letters B* 429, 375 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of η' (958) Formation in Two-Photon Collisions at LEP1,” *Physics Letters B* 418, 399 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of Radiative Bhabha and Quasi-Real Compton-Scattering,” *Physics Letters B* 439, 183 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of Tau-Polarization at LEP,” *Physics Letters B* 429, 387 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of the Anomalous Magnetic and Electric-Dipole Moments of the Tau-Lepton,” *Physics Letters B* 434, 169 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of the Average Lifetime of B-Hadrons in Z-Decays,” *Physics Letters B* 416, 220 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of the $B_d^0 - \bar{B}_d^0$ Oscillation Frequency,” *European Physical Journal C* 5, 195 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of the Effective Weak Mixing Angle by Jet-Charge Asymmetry in Hadronic Decays of the Z-Boson,” *Physics Letters B* 439, 225 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of the Inclusive Charmless Semileptonic Branching Fraction of Beauty Hadrons and a Determination of $|V_{ub}|$ at LEP,” *Physics Letters B* 436, 174 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of the Michel Parameters and the Average Tau-Neutrino Helicity from Tau-Decays at LEP,” *Physics Letters B* 438, 405 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of the Weak Dipole-Moments of the Tau-Lepton,” *Physics Letters B* 426, 207 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Measurement of W-Pair Cross-Sections in e^+e^- Interactions at $\sqrt{s} = 183$ GeV and W-Decay Branching Fractions,” *Physics Letters B* 436, 437 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), “Missing Mass Spectra in Hadronic Events from e^+e^- Collisions at $\sqrt{s} = 161\text{--}172$ GeV and Limits on Invisible Higgs Decays,” *Physics Letters B* 418, 389 (1998).

- M. Acciarri, *et al.* (L3 Collaboration), "Photon Structure Functions and Azimuthal Correlations of Lepton Pairs in Tagged Gamma-Gamma Collisions," *Physics Letters B* 438, 363 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Production of Single W-Bosons in e^+e^- Interactions at $130 \leq \sqrt{s} \leq 183$ GeV and Limits on Anomalous WW-Gamma Couplings," *Physics Letters B* 436, 417 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Search for Neutral Higgs Bosons of the Minimal Supersymmetric Standard Model in e^+e^- Interactions at $\sqrt{s} = 130\text{--}183$ GeV," *Physics Letters B* 436, 389 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Search for New Physics Phenomena in Fermion-Pair Production at LEP," *Physics Letters B* 433, 163 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Search for Scalar Leptons, Charginos, and Neutralinos in e^+e^- Collisions at $\sqrt{s} = 161\text{--}172$ GeV," *European Physical Journal C* 4, 207 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Search for the Standard Model Higgs-Boson in e^+e^- Interactions at $\sqrt{s} = 183$ GeV," *Physics Letters B* 431, 437 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Study of Anomalous $z\gamma\gamma$ and $z\gamma\gamma$ Couplings at LEP," *Physics Letters B* 436, 187 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Study of the Hadronic Photon Structure-Function $F_2(\gamma)$ at LEP," *Physics Letters B* 436, 403 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Test of CP Invariance in $Z \rightarrow \mu^+\mu^-\gamma$ Decay," *Physics Letters B* 436, 428 (1998).
- M. Acciarri, *et al.* (L3 Collaboration), "Upper Limit on the Lifetime Difference of Short-Lived and Long-Lived B_s^0 Mesons," *Physics Letters B* 438, 417 (1998).
- D. L. Adams, N. Akchurin, L. V. Alexeeva, N. I. Belikov, B. E. Bonner, A. Bravar, J. Bystricky, M. D. Corcoran, J. D. Cossairt, J. Cranshaw, A. A. Derevschikov, H. En'yo, H. Funahashi, Y. Goto, O. A. Grachov, D. P. Grosnick, D. A. Hill, T. Iijima, K. Imai, Y. Itow, K. Iwatani, Yu. V. Kharlov, K. W. Krueger, K. Kuroda, M. Laghai, F. Lehar, A. de Lesquen, D. Lopiano, G. C. Luehring, T. Maki, S. Makino, A. Masaike, Yu. A. Matulenko, A. P. Meschanin, A. Michalowicz, D. H. Miller, K. Miyake, T. Nagamine, F. Nessi-Tedaldi, M. Nessi, C. Nguyen, L. V. Nogach, S. B. Nurushev, Y. Ohashi, Y. Onel, D. I. Patalakha, G. Pauletta, A. Penzo, G. F. Rappazzo, A. L. Read, J. B. Roberts, L. van Rossum, V. L. Rykov, N. Saito, G. Salvato, P. Schiavon, T. Shima, J. Skeens, V. L. Solovyanov, H. Spinka, R. W. Staneck, R. Takashima, F. Takeutchi, N. Tamura, N. Tanaka,

D. G. Underwood, A. N. Vasiliev, J. L. White, S. Yamashita, A. Yokosawa, T. Yoshida, and A. Zanetti, "Measurement of Single Spin Asymmetry in η -Meson Production in $p \uparrow p$ and $\bar{p} \uparrow p$ Interactions in the Beam Fragmentation Region at 200 GeV/c," *Nuclear Physics B* 510, 3 (1998).

S. Adler, M. S. Atiya, I.-H. Chiang, J. S. Frank, J. S. Haggerty, T. F. Kycia, K. K. Li, L. S. Littenberg, A. Sambamurti, A. Stevens, R. C. Strand, C. Witzig, W. C. Louis, D. S. Akerib, M. Ardebili, M. Convery, M. M. Ito, D. R. Marlow, R. McPherson, P. D. Meyers, M. A. Selen, F. C. Shoemaker, A. J. S. Smith, E. W. Blackmore, D. A. Bryman, L. Felawka, A. Konaka, Y. Kuno, J. A. MacDonald, T. Numao, P. Padley, J.-M. Poutissou, R. Poutissou, J. Roy, A. S. Turcot, P. Kitching, T. Nakano, M. Rozon, and R. Soluk, "Upper Limit on the Decay $K^+ \rightarrow e^+ \nu - \mu^+ \mu^-$," *Physical Review D* 5801, 2003 (1998).

D. V. Ahluwalia, "Can General-Relativistic Description of Gravitation be Considered Complete?" *Modern Physics Letters A* 13, 1393 (1998).

D. V. Ahluwalia and C. Burgard, "Interplay of Gravitation and Linear Superposition of Different Mass Eigenstates," *Physical Review D* 57, 4724 (1998).

V. Y. Alexakhin, S. I. Gogolev, M. K. Khankhasayev, Z. B. Kurmanov, K. O. Oganesyan, E. A. Pasyuk, C. L. Morris, J. M. O'Donnell, M. W. Rawool-Sullivan, M. K. Jones, F. F. Guber, and A. I. Reshetin, " $\pi^+ + {}^{12}\text{C}$ Elastic-Scattering between 18 and 44 MeV," *Physical Review C* 57, 2409 (1998).

C. Athanassopoulos, L. B. Auerbach, R. L. Burman, D. O. Caldwell, E. D. Church, I. Cohen, J. B. Donahue, A. Fazely, F. J. Federspiel, G. T. Garvey, R. M. Gunasingha, R. Imlay, K. Johnston, H. J. Kim, W. C. Louis, R. Majkic, K. McIlhany, W. Metcalf, G. B. Mills, R. A. Reeder, V. Sandberg, D. Smith, I. Stancu, W. Strossman, R. Tayloe, G. J. VanDalen, W. Vernon, N. Wadia, J. Waltz, D. H. White, D. Works, Y. Xiao, and S. Yellin, "Results on $\nu_\mu \rightarrow \nu_e$ Oscillations from Pion Decay In-Flight Neutrinos," *Physical Review C* 58, 2489 (1998).

P. D. Bangert, M. D. Cooper, and S. K. Lamoreaux, "Enhancement of Superthermal Ultracold Neutron-Production by Trapping Cold Neutrons," *Nuclear Instruments and Methods in Physics Research Section A* 410, 264 (1998).

C. W. Barnes, H. S. Bosch, H. W. Hendel, A. G. A. Huibers, D. L. Jassby, R. W. Motley, E. B. Nieschmidt, T. Saito, J. D. Strachan, M. Bitter, R. V. Budny, K. W. Hill, D. K. Mansfield, D. C. McCune, R. Nazikian, H. K. Park, A. T. Ramsey, S. D. Scott, G. Taylor, and M. C. Zarnstorff, "Triton Burnup Measurements and Calculations on TFTR," *Nuclear Fusion* 38, 597 (1998).

I. G. Bearden, H. Bøggild, J. Boissevain, J. Dodd, B. Erazmus, S. Esumi, C. W. Fabjan, D. Ferenc, D. E. Fields, A. Franz, J. Gaardhøje, M. Hamelin, A. G. Hansen, O. Hansen, D. Hardtke, H. van Hecke, E. B. Holzer, T. J. Humanic, P. Hummel, B. V. Jacak, R. Jayanti, K. Kaimi, M. Kaneta, T. Kohama, M. Kopytine, M. Leltchouk, A. Ljubicic, B. Lörstad, N. Maeda, R. Malina, A. Medvedev, M. Murray, H. Ohnishi, G. Paic, S. U. Pandey, F. Piuz, J. Pluta, V. Polychronakos, M. Potekhin, G. Poulard, D. Reichhold, A. Sakaguchi, J. Simon-Gillo, J. Schmidt-Sørensen, W. Sondheim, M. Spegel, T. Sugitate, J. P. Sullivan, Y. Sumi, W. J. Willis, K. L. Wolf, N. Xu, and D. S. Zachary, "High-Energy Pb + Pb Collisions Viewed by Pion Interferometry," *Physical Review C* 58, 1656 (1998).

I. G. Bearden, H. Bøggild, J. Boissevain, J. Dodd, S. Esumi, C. W. Fabjan, D. E. Fields, A. Franz, A. G. Hansen, E. B. Holzer, T. J. Humanic, B. V. Jacak, R. Jayanti, H. Kalechofsky, Y. Y. Lee, M. Leltchouk, B. Lörstad, N. Maeda, A. Medvedev, A. Miyabayashi, M. Murray, S. Nishimura, S. U. Pandey, F. Piuz, V. Polychronakos, M. Potekhin, G. Poulard, A. Sakaguchi, M. Sarabura, M. Spegel, J. Simon-Gillo, W. Sondheim, T. Sugitate, J. P. Sullivan, Y. Sumi, H. van Hecke, W. J. Willis, K. Wolf, and N. Xu, "Proton and Antiproton Distributions at Midrapidity in Proton-Nucleus and Sulfur-Nucleus Collisions," *Physical Review C* 57, 837 (1998).

V. M. Belyaev and M. B. Johnson, "Pion Light-Cone Wave Functions and Light-Front Quark-Model," *Physics Letters B* 423, 379 (1998).

A. R. Berdoz, J. Birchall, J. D. Bowman, J. R. Campbell, C. A. Davis, A. A. Green, P. W. Green, A. A. Hamian, D. C. Healey, R. Helmer, S. Kadantsev, Y. Kuznetsov, R. Laxdal, L. Lee, C. D. P. Levy, R. E. Mischke, S. A. Page, W. D. Ramsay, S. D. Reitzner, G. Roy, P. W. Schmor, A. M. Sekulovich, J. Soukup, G. M. Stinson, T. Stocki, V. Sum, N. A. Titov, W. T. H. van Oers, R. J. Woo, and A. N. Zelenski, "Parity Violation in Proton-Proton Scattering," *Nuclear Physics A* 629, C433 (1998).

L. A. Bernstein, J. A. Becker, W. Younes, D. E. Archer, K. Hauschild, G. D. Johns, R. O. Nelson, W. S. Wilburn, and D. M. Drake, "Probing Reaction Dynamics With the Pt-196(N,Xn γ) Reactions for $x \leq 15$," *Physical Review C* 57, R2799 (1998).

L. Bitteker, "Nuclear-Induced Electrical-Conductivity in ${}^3\text{He}$," *Journal of Applied Physics* 83, 4018 (1998).

K. I. Blomqvist, W. U. Boeglin, R. Böhm, M. Distler, R. Edelhoff, J. Friedrich, R. Geiges, M. K. Jones, M. Kahrau, M. Korn, H. Kramer, K. W. Krygier, V. Kunde, M. Kuss, A. Liesenfeld, K. Merle, C. L. Morris, R. Neuhausen, E. A. J. M. Offermann, Th. Pospischil, M. Potokar, R. D. Ransome, A. W. Richter, B. G. Ritchie, A. Rokavec, G. Rosner, J. Ryckebusch, P. Sauer, S. Schardt, B. Vodenik, A. Wagner, Th. Walcher, S. Wolf, and M. K. Yadav, "Investigation of Short-Range Nucleon-

Appendix B

Nucleon Correlations using the Reaction $^{12}\text{C}(e,e'pp)$ in Close to 4π Geometry," *Physics Letters B* 421, 71 (1998).

J. S. Brooks, L. Engel, J. Cothern, J. A. Simmons, M. J. Hafich, W. Lewis, S. Gallegos, D. Devore, B. Marshall, M. Grover, G. Leach, C. H. Mielke, D. Rickel, D. Clark, M. Fowler, J. King, L. Tabaka, J. Detwiler, E. C. Clark, R. G. Clark, A. Dzurak, B. Kane, N. Miura, O. Tatsenko, V. Platonov, and A. Bykov, "Dirac-II Series in 800 T Fields: Reflectivity Measurements on Low-Dimensional, Low Electron-Density Materials," *Physica B* 246, 50 (1998).

J. Brzychczyk, E. C. Pollacco, C. Volant, D. Lacroix, R. Lagrain, K. Kwiatkowski, D. S. Bracken, K. B. Morley, E. Renshaw Foxford, V. E. Viola, N. R. Yoder, R. G. Korteling, J. Cugnon, and H. Breuer, "Diversity of Fragment Sizes in Fultiframentation of Gold Nuclei Induced by Relativistic ^3He ions," *Physics Review C* 58, R1372 (1998).

W. T. Buttler, R. J. Hughes, P. G. Kwiat, S. K. Lamoreaux, G. G. Luther, G. L. Morgan, J. E. Nordholt, C. G. Peterson, and C. M. Simmons, "Practical Free-Space Quantum Key Distribution Over 1 km," *Physical Review Letters* 81, 3283 (1998).

W. T. Buttler, R. J. Hughes, P. G. Kwiat, G. G. Luther, G. L. Morgan, J. E. Nordholt, C. G. Peterson, and C. M. Simmons, "Free-Space Quantum-Key Distribution," *Physical Review A* 57, 2379 (1998).

C. A. Cagliardi, E. A. Hawker, R. E. Tribble, D. D. Koetke, P. M. Nord, P. L. McGaughey, and C. N. Brown, "Hardware Trigger System for Fermilab E866," *Nuclear Instruments and Methods in Physics Research A* 418, 322 (1998).

N. J. Cerf, C. Adami, and P. G. Kwiat, "Optical-Simulation of Quantum Logic," *Physical Review A* 57, R1477 (1998).

R. E. Chrien, N. M. Hoffman, J. D. Colvin, C. J. Keane, O. L. Landen, and B. A. Hammel, "Fusion Neutrons from the Gas-Pusher Interface in Deuterated-Shell Inertial Confinement Fusion Implosions," *Physics of Plasmas* 5, 768 (1998).

B. P. Cluggish, J. R. Danielson, and C. F. Driscoll, "Resonant Particle Heating of an Electron Plasma by Oscillating Sheaths," *Physical Review Letters* 81, 353 (1998).

B. P. Cluggish and C. P. Munson, "Secondary-Electron Enhanced Discharges in Plasma Source Ion-Implantation," *Journal of Applied Physics* 84, 5945 (1998).

B. P. Cluggish and C. P. Munson, "Sheath Overlap during Very Large-Scale Plasma Source Ion-Implantation," *Journal of Applied Physics* 84, 5937 (1998).

J. A. Cobble, A. V. Bessarab, A. V. Kunin, V. A. Tokarev, and S. R. Goldman, "Radiation Temperature-Measurements in Laser-Heated Hohlraums," *Plasma Physics Reports* 24, 180 (1998).

J. A. Cobble, R. P. Johnson, and R. J. Mason, "Wavelength Scaling of High-Intensity Illumination of an Exploded Foil," *Physics of Plasmas* 5, 4005 (1998).

S. R. Cook, M. A. Hoffbauer, D. D. Clark, and J. B. Cross, "Measurements of the Reduced Force Coefficients for H₂, N₂, CO, and CO₂ Incident upon a Solar Panel Array Material, SiO₂-Coated Kapton, Kapton, and Z-93-Coated Al," *Physical Review E* 58, 492 (1998).

M. D. Cooper, V. Armijo, J. K. Black, R. D. Bolton, S. Carius, C. Espinoza, G. Hart, G. E. Hogan, A. Gonzales, M. A. Kroupa, R. E. Mischke, J. Sandoval, S. Schilling, J. Sena, G. Suazo, D. A. Whitehouse, C. A. Wilkinson, K. Stantz, J. J. Szymanski, C. C. Jui, C. A. Gagliardi, R. E. Tribble, X. L. Tu, R. J. Fisk, D. D. Koetke, R. W. Manweiler, P. M. Nord, S. Stanislaus, L. E. Piilonen, and Y. D. Zhang, "Construction and Performance of Mega's Low-Mass, High-Rate Cylindrical MWPCs," *Nuclear Instruments and Methods in Physics Research A* 417, 24 (1998).

B. E. Crawford, J. D. Bowman, P. P. J. Delheij, C. M. Frankle, M. Iinuma, J. N. Knudson, L. Y. Lowie, A. Masaike, Y. Matsuda, G. E. Mitchell, S. I. Penttilä, H. Postma, N. R. Roberson, S. J. Seestrom, E. I. Sharapov, S. L. Stephenson, Y.-F. Yen, and V. W. Yuan, "Parity Nonconservation in Neutron Resonances in ²³⁸U," *Physical Review C* 58, 1225 (1998).

B. E. Crawford, J. D. Bowman, P. P. J. Delheij, T. Haseyama, J. N. Knudson, L. Y. Lowie, A. Masaike, Y. Matsuda, G. E. Mitchell, S. I. Penttilä, H. Postma, N. R. Roberson, S. J. Seestrom, E. I. Sharapov, S. L. Stephenson, and V. W. Yuan, "Neutron Resonance Spectroscopy of ¹⁰⁶Pd and ¹⁰⁸Pd from 20 to 2,000 eV," *Physical Review C* 58, 729 (1998).

H. A. Davis, B. P. Wood, C. P. Munson, L. J. Bitteker, M. A. Nastasi, D. J. Rej, W. J. Waganaar, K. C. Walter, D. M. Coates, and H. M. Schleinitz, "Ion-Beam and Plasma Technology Development for Surface Modification at Los Alamos National Laboratory," *Materials Chemistry and Physics* 54, 213 (1998).

A. S. Dzurak, B. E. Kane, R. G. Clark, N. E. Lumpkin, J. O'Brien, G. R. Facer, R. P. Starrett, A. Skougarevsky, H. Nakagawa, N. Miura, Y. Enomoto, D. G. Rickel, J. D. Goettee, L. J. Campbell, C. M. Fowler, C. Mielke, J. C. King, W. D. Zerwekh, D. Clark, B. D. Bartram, A. I. Bykov, O. M. Tatsenko, V. V. Platonov, E. E. Mitchell, J. Herrmann, and K. H. Muller, "Transport Measurements of Inplane Critical Fields in YBa₂Cu₃O_{7-Δ} to 300T," *Physical Review B-Condensed Matter* 57, 14084 (1998).

- A. S. Dzurak, B. E. Kane, R. G. Clark, N. E. Lumpkin, J. O'Brien, G. R. Facer, R. P. Starrett, A. Skougarevsky, H. Nakagawa, N. Miura, D. G. Rickel, J. D. Goettee, L. J. Campbell, C. M. Fowler, C. Mielke, J. C. King, W. D. Zerwekh, D. Clark, B. D. Bartram, M. von Ortenberg, F. Herlach, H. Yokoi, A. I. Bykov, O. M. Tatsenko, V. V. Platonov, E. E. Mitchell, J. Hermann, K. H. Muller, K. D. Maranowski, and A. C. Gosard, "Low-Temperature Transport Measurements of Superconductors and Semiconductors in Magnetic-Fields to 800 T," *Physica B* 246, 40 (1998).
- M. N. Ericson, M. D. Allen, J. Boissevain, C. L. Britton, M. S. Emery, S. F. Hahn, J. S. Kapustinsky, R. E. Lind, M. S. Musrock, J. Simon-Gillo, D. E. Smith, J. P. Sullivan, H. van Hecke, G. R. Young, and M. C. Smith, "Front-End Module Readout and Control Electronics for the Phenix Multiplicity Vertex Detector," *IEEE Transactions on Nuclear Science* 45, 833 (1998).
- M. A. Espy, R. H. Kraus, Jr., E. R. Flynn, and A. Matlashov, "Two Methods for a First Order Hardware Gradiometer using Two High Temperature Superconducting Quantum Interference Devices," *Review of Scientific Instruments* 69, 123 (1998).
- C. Evangelista, A. Palano, D. Drijard, N. H. Hamann, R. T. Jones, B. Mouellie, S. Ohlsson, J.-M. Perreau, W. Eyrich, M. Moosburger, S. Pomp, F. Stinzing, H. Fischer, J. Franz, E. Rössle, H. Schmitt, H. Wirth, A. Buzzo, K. Kirsebom, M. Lo Vetere, M. Macri, M. Marinelli, S. Passaggio, M. G. Pia, A. Pozzo, E. Robutti, A. Santroni, P. T. Debevec, R. A. Eisenstein, P. G. Harris, D. W. Hertzog, S. A. Hughes, P. E. Reimer, J. Ritter, R. Geyer, K. Kilian, W. Oelert, K. Röhrich, M. Rook, O. Steinkamp, H. Korsmo, B. Stugu, and T. Johansson, "Study of the Reaction $\bar{p}p \rightarrow \Phi\Phi$ from 1.1 to 2.0 GeV/c," *Physics Review D* 57, 5370 (1998).
- J. C. Fernández, B. S. Bauer, K. S. Bradley, J. A. Cobble, D. S. Montgomery, R. G. Watt, B. Bezzerides, K. G. Estabrook, R. Focia, S. R. Goldman, D. B. Harris, E. L. Lindman, H. A. Rose, J. Wallace, and B. H. Wilde, "Increased Saturated Levels of Stimulated Brillouin-Scattering of a Laser by Seeding a Plasma with an External Light-Source," *Physical Review Letters* 81, 2252 (1998).
- E. Frlez, D. Pocanic, K. A. Assamagan, J. P. Chen, K. J. Keeter, R. M. Marshall, R. C. Minehart, L. C. Smith, G. E. Dodge, S. S. Hanna, B. H. King, and J. N. Knudson, "Differential Cross Sections for Pion Charge Exchange on the Proton at 27.5 MeV," *Physical Review C* 57, 3144 (1998).
- Y. Fukuda, T. Hayakawa, E. Ichihara, K. Inoue, K. Ishihara, H. Ishino, Y. Itow, T. Kajita, J. Kameda, S. Kasuga, K. Kobayashi, Y. Kobayashi, Y. Koshio, K. Martens, M. Miura, M. Nakahata, S. Nakayama, A. Okada, M. Oketa, K. Okumura, M. Ota, N. Sakurai, M. Shiozawa, Y. Suzuki,

Y. Takeuchi, Y. Totsuka, S. Yamada, M. Earl, A. Habig, J. T. Hong, E. Kearns, S. B. Kim, M. Masuzawa, M. D. Messier, K. Scholberg, J. L. Stone, L. R. Sulak, C. W. Walter, M. Goldhaber, T. Barszczak, W. Gajewski, P. G. Halverson, J. Hsu, W. R. Kropp, L. R. Price, F. Reines, H. W. Sobel, M. R. Vagins, K. S. Ganezer, W. E. Keig, R. W. Ellsworth, S. Tasaka, J. W. Flanagan, A. Kibayashi, J. G. Learned, S. Matsuno, V. Stenger, D. Takemori, T. Ishii, J. Kanzaki, T. Kobayashi, K. Nakamura, K. Nishikawa, Y. Oyama, A. Sakai, M. Sakuda, O. Sasaki, S. Echigo, M. Kohama, A. T. Suzuki, T. J. Haines, E. Blaufuss, R. Sanford, R. Svoboda, M. L. Chen, Z. Conner, J. A. Goodman, G. W. Sullivan, M. Mori, J. Hill, C. K. Jung, C. Mauger, C. McGrew, E. Sharkey, B. Viren, C. Yanagisawa, W. Doki, T. Ishizuka, Y. Kitaguchi, H. Koga, K. Miyano, H. Okazawa, C. Saji, M. Takahata, A. Kusano, Y. Nagashima, M. Takita, T. Yamaguchi, M. Yoshida, M. Etoh, K. Fujita, A. Hasegawa, T. Hasegawa, S. Hatakeyama, T. Iwamoto, T. Kinebuchi, M. Koga, T. Maruyama, H. Ogawa, A. Suzuki, F. Tsushima, M. Koshiba, M. Nemoto, K. Nishijima, T. Futagami, Y. Hayato, Y. Kanaya, K. Kaneyuki, Y. Watanabe, D. Kielczewska, R. Doyle, J. George, A. Stachyra, L. Wai, J. Wilkes, and K. Young, "Measurements of the Solar-Neutrino Flux from Super-Kamiokande's First 300 Days," *Physical Review Letters* 81, 1158 (1998).

Y. Fukuda, T. Hayakawa, E. Ichihara, K. Inoue, K. Ishihara, H. Ishino, Y. Itow, T. Kajita, J. Kameda, S. Kasuga, K. Kobayashi, Y. Kobayashi, Y. Koshio, K. Martens, M. Miura, M. Nakahata, S. Nakayama, A. Okada, M. Oketa, K. Okumura, M. Ota, N. Sakurai, M. Shiozawa, Y. Suzuki, Y. Takeuchi, Y. Totsuka, S. Yamada, M. Earl, A. Habig, E. Kearns, S. B. Kim, M. D. Messier, K. Scholberg, J. L. Stone, L. R. Sulak, C. W. Walter, M. Goldhaber, T. Barszczak, W. Gajewski, P. G. Halverson, J. Hsu, W. R. Kropp, L. R. Price, F. Reines, H. W. Sobel, M. R. Vagins, K. S. Ganezer, W. E. Keig, R. W. Ellsworth, S. Tasaka, J. W. Flanagan, A. Kibayashi, J. G. Learned, S. Matsuno, V. Stenger, D. Takemori, T. Ishii, J. Kanzaki, T. Kobayashi, K. Nakamura, K. Nishikawa, Y. Oyama, A. Sakai, M. Sakuda, O. Sasaki, S. Echigo, M. Kohama, A. T. Suzuki, T. J. Haines, E. Blaufuss, R. Sanford, R. Svoboda, M. L. Chen, Z. Conner, J. A. Goodman, G. W. Sullivan, M. Mori, J. Hill, C. K. Jung, C. Mauger, C. McGrew, E. Sharkey, B. Viren, C. Yanagisawa, W. Doki, T. Ishizuka, Y. Kitaguchi, H. Koga, K. Miyano, H. Okazawa, C. Saji, M. Takahata, A. Kusano, Y. Nagashima, M. Takita, T. Yamaguchi, M. Yoshida, M. Etoh, K. Fujita, A. Hasegawa, T. Hasegawa, S. Hatakeyama, T. Iwamoto, T. Kinebuchi, M. Koga, T. Maruyama, H. Ogawa, A. Suzuki, F. Tsushima, M. Koshiba, M. Nemoto, K. Nishijima, T. Futagami, Y. Hayato, Y. Kanaya, K. Kaneyuki, Y. Watanabe, D. Kielczewska, R. Doyle, J. George, A. Stachyra, L. Wai, J. Wilkes, and K. Young, "Study of the Atmospheric Neutrino Flux in the Multi-GeV Energy-Range," *Physics Letters B* 436, 33 (1998).

Y. Fukuda, T. Hayakawa, E. Ichihara, K. Inoue, K. Ishihara, H. Ishino, Y. Itow, T. Kajita, J. Kameda, S. Kasuga, K. Kobayashi, Y. Kobayashi, Y. Koshio, M. Miura, M. Nakahata, S. Nakayama, A. Okada, K. Okumura, N. Sakurai, M. Shiozawa, Y. Suzuki, Y. Takeuchi, Y. Totsuka, S. Yamada, M. Earl, A. Habig, E. Kearns, M. D. Messier, K. Scholberg, J. L. Stone,

- L. R. Sulak, C. W. Walter, M. Goldhaber, T. Barszczak, D. Casper, W. Gajewski, P. G. Halverson, J. Hsu, W. R. Kropp, L. R. Price, F. Reines, M. Smy, H. W. Sobel, M. R. Vagins, K. S. Ganezer, W. E. Keig, R. W. Ellsworth, S. Tasaka, J. W. Flanagan, A. Kibayashi, J. G. Learned, S. Matsuno, V. J. Stenger, D. Takemori, T. Ishii, J. Kanzaki, T. Kobayashi, S. Mine, K. Nakamura, K. Nishikawa, Y. Oyama, A. Sakai, M. Sakuda, O. Sasaki, S. Echigo, M. Kohama, A. T. Suzuki, T. J. Haines, E. Blaufuss, B. K. Kim, R. Sanford, R. Svoboda, M. L. Chen, Z. Conner, J. A. Goodman, G. W. Sullivan, J. Hill, C. K. Jung, K. Martens, C. Mauger, C. McGrew, E. Sharkey, B. Viren, C. Yanagisawa, W. Dokic, K. Miyano, H. Okazawa, C. Saji, M. Takahata, Y. Nagashima, M. Takita, T. Yamaguchi, M. Yoshida, S. B. Kim, M. Etoh, K. Fujita, A. Hasegawa, T. Hasegawa, S. Hatakeyama, T. Iwamoto, M. Koga, T. Maruyama, H. Ogawa, J. Shirai, A. Suzuki, F. Tsushima, M. Koshiba, M. Nemoto, K. Nishijima, T. Futagami, Y. Hayato, Y. Kanaya, K. Kaneyuki, Y. Watanabe, D. Kielczewska, R. A. Doyle, J. S. George, A. L. Stachyra, L. L. Wai, R. J. Wilkes, and K. K. Young, "Evidence for Oscillation of Atmospheric Neutrinos," *Physical Review Letters* 81, 1562 (1998).
- R. Guckert, X. Zhao, S. G. Crane, A. Hime, W. A. Taylor, D. Tupa, D. J. Vieira, and H. Wollnik, "Magnetooptical Trapping of Radioactive ^{82}Rb Atoms," *Physical Review A* 58, R1637 (1998).
- D. G. Haase, C. D. Keith, C. R. Gould, P. R. Huffman, N. R. Roberson, M. L. Seely, W. Tornow, and W. S. Wilburn, "The Scattering of Polarized Neutrons from Static Polarized Solid ^3He ," *Nuclear Instruments and Methods in Physics Research A* 402, 341 (1998).
- A. H. Hamdi, X. Qiu, G. W. Malaczynski, A. A. Elmoursi, S. Simko, M. C. Militello, M. P. Balogh, B. P. Wood, K. C. Walter, and M. A. Nastasi, "Microstructure Analysis of Plasma Immersion Ion-Implanted Diamond-Like Carbon Coatings," *Surface and Coatings Technology* 104, 395 (1998).
- E. A. Hawker, T. C. Awes, M. E. Beddo, C. N. Brown, J. D. Bush, T. A. Carey, T. H. Chang, W. E. Cooper, C. A. Gagliardi, G. T. Garvey, D. F. Geesaman, X. C. He, L. D. Eisenhower, S. B. Kaufman, D. M. Kaplan, P. N. Kirk, D. D. Koetke, G. Kyle, D. M. Lee, W. M. Lee, M. J. Leitch, N. Makins, P. L. McGaughey, J. M. Moss, B. A. Mueller, P. M. Nord, B. K. Park, V. Papavassiliou, J.-C. Peng, G. Pettit, P. E. Reimer, M. E. Sadler, J. Selden, P. W. Stankus, W. E. Sondheim, T. N. Thompson, R. S. Towell, R. E. Tribble, M. A. Vasiliev, Y. C. Wang, Z. F. Wang, J. C. Webb, J. L. Willis, D. K. Wise, and G. R. Young, "Measurement of the Light Antiquark Flavor Asymmetry in the Nucleon Sea," *Physical Review Letters* 80, 3715 (1998).
- W.-C. Hsi, K. Kwiatkowski, G. Wang, D. S. Bracken, E. Cornell, D. S. Ginger, V. E. Viola, N. R. Yoder, R. G. Korteling, R. Gimeno-Nogues, E. Ramakrishnan, D. Rowland, S. J. Yennello, R. Huang, W. G. Lynch, M. B. Tsang, H. Xi, H. Breuer, K. B. Morley, S. Gushue,

- L. P. Remsberg, W. A. Friedman, and A. Botvina, "Sideways-Peaked Angular-Distributions in Hadron-Induced-Multifragmentation: Shock-Waves, Geometry, or Kinematics," *Physical Review C* 48, R13 (1998).
- M. C. Huang, J. Aine, S. Supek, E. Best, D. Ranken, and E. R. Flynn, "Multi-Start Downhill Simplex Method for Spatiotemporal Source Localization in Magnetoencephalography Evoked Potentials," *Electroencephalography and Clinical Neurophysiology* 108, 32 (1998).
- R. J. Hughes, "Cryptography, Quantum Computation and Trapped Ions," *Philosophical Transactions of the Royal Society of London Series A* 356, 1853 (1998).
- R. J. Hughes and D. F. V. James, "Prospects for Quantum Computation with Trapped Ions," *Fortschritte der Physik* 46, 759 (1998).
- R. J. Hughes, D. F. V. James, J. J. Gomez, M. S. Gulley, M. H. Holzscheiter, P. G. Kwiat, S. K. Lamoreaux, C. G. Peterson, V. D. Sandberg, M. M. Schauer, C. M. Simmons, C. E. Thorburn, D. Tupa, P. Z. Wang, and A. G. White, "The Los Alamos Trapped Ion Quantum Computer Experiment," *Fortschritte Der Physik-Progress of Physics* 46, 329 (1998).
- M. B. Johnson and V. M. Belyaev, "Deep-Inelastic Scattering and the Pion Light-Cone Wave-Function," *Acta Physica Polonica B* 29, 2527 (1998).
- M. B. Johnson and L. S. Kisslinger, "Hadronic Couplings via QCD Sum Rules using Three-Point Functions: Vacuum Susceptibilities," *Physical Review D* 57, 2847 (1998).
- J. S. Kapustinsky, J. Boissevain, E. Bosze, D. Clark, D. Jaffe, S. Y. Kim, L. Marek, J. Simon-Gillo, J. Sullivan, H. van Hecke, and G. Xu, "A Double-Metal Silicon Pad Design for the PHENIX Multiplicity/Vertex Detector," *Nuclear Instruments and Methods in Physics Research A* 409, 173 (1998).
- A. A. Khan, T. Bhattacharya, S. Collins, C. T. H. Davies, R. Gupta, C. Morningstar, J. Shigemitsu, and J. Sloan, "B-Meson Decay Constants from NRQCD," *Physics Letters B* 427, 132 (1998).
- J. A. Koch, O. L. Landen, T. W. Barbee, P. Celliers, L. B. Dasilva, S. G. Glendinning, B. A. Hammel, D. H. Kalantar, C. Brown, J. Seely, G. R. Bennett, and W. Hsing, "High-Energy X-Ray Microscopy Techniques for Laser-Fusion Plasma Research at the National Ignition Facility," *Applied Optics* 37, 1784 (1998).
- J. A. Koch, O. L. Landen, B. A. Hammel, J. Seely, T. W. Barbee, G. Bennett, C. Brown, P. Celliers, L. B. Dasilva, S. G. Glendinning, W. Hsing, and D. H. Kalantar, "High-Energy X-Ray Microscopy of Laser-

Appendix B

Fusion Plasmas at the National Ignition Facility," *Plasma Physics Reports* 24, 177 (1998).

T. Kozlowski, E. Desmond, J. Haggerty, H.-J. Kehayias, M. Purschke, and C. Witzig, "Analysis, Design, and Implementation of PHENIX Online Computing Systems Software using Shlaer-Mellor Object-Oriented Analysis and Recursive-Design," *Computer Physics Communications* 110, 164 (1998).

M. Krammer, W. Adam, C. Bauer, E. Berdermann, F. Bogani, E. Borchi, M. Bruzzi, C. Colledani, J. Conway, W. Dabrowski, P. Delpierre, A. Deneuville, W. Dulinski, B. Vaneijk, A. Fallou, D. Fish, F. Foulon, M. Friedl, K. K. Gan, E. Gheeraert, E. Grigoriev, G. Hallewell, R. Hallwilton, S. Han, F. Hartjes, J. Hrubec, D. Husson, H. Kagan, D. Kania, J. Kaplon, R. Kass, K. T. Knöpfle, P. F. Manfredi, D. Meier, M. Mishina, F. Lenormand, L. S. Pan, H. Pernegger, M. Pernicka, V. Re, G. L. Riester, S. Roe, D. Roff, A. Rudge, S. Schnetzer, S. Sciortino, V. Speziali, H. Stelzer, R. Stone, R. J. Tapper, R. Tesarek, G. B. Thomson, M. Trawick, W. Trischuk, R. Turchetta, A. M. Walsh, R. Wedenig, P. Weilhammer, H. Ziock, and M. Zoeller, "Status of Diamond Particle Detectors," *Nuclear Instruments and Methods in Physics Research Section A* 418, 196 (1998).

W. L. Kruer, B. B. Afeyan, A. E. Chou, R. K. Kirkwood, D. S. Montgomery, P. W. Rambo, and S. C. Wilks, "Interplay Between Laser-Plasma Instabilities," *Physica Scripta* T75, 7 (1998).

P. G. Kwiat, "Experimental and Theoretical Progress in Interaction-Free Measurements," *Physica Scripta* T76, 115 (1998).

P. G. Kwiat and H. Weinfurter, "Embedded Bell-State Analysis," *Physical Review A* 58, R2623 (1998).

K. Kwiatkowski, D. S. Bracken, E. Renshaw Foxford, K. B. Morley, E. C. Pollacco, C. Volant, R. G. Korteling, W. A. Friedman, and A. S. Botvina, "Heating Nuclear Matter with GeV ^3He Beams," *Physics Letters B* 423, 21 (1998).

R. M. Leahy, J. C. Mosher, M. E. Spencer, M. X. Huang, and J. D. Lewine, "A Study of Dipole Localization Accuracy for MEG and EEG using a Human Skull Phantom," *Electroencephalography and Clinical Neurophysiology* 107, 159 (1998).

D. H. Lee, X. M. He, K. C. Walter, M. Nastasi, J. R. Tesmer, M. Tuszewski, and D. R. Tallant, "Diamond-Like Carbon Deposition on Silicon using Radiofrequency Inductive Plasma of Ar and C_2H_2 Gas-Mixture in Plasma Immersion Ion Deposition," *Applied Physics Letters* 73, 2423 (1998).

- S. A. Long, B. M. Spicer, K. J. Raywood, R. Abegg, W. P. Alford, A. Celler, D. Frekers, P. E. Green, O. Häusser, R. L. Helmer, R. S. Henderson, K. H. Hicks, K. P. Jackson, R. G. Jeppesen, N. S. P. King, C. A. Miller, M. A. Moinester, V. C. Officer, G. G. Shute, A. Trudel, M. C. Vetterli, A. I. Yavin, and S. Yen, "Spin-Isovector Giant-Resonances Induced by (N,P) Reactions on Heavy-Nuclei," *Physical Review C* 57, 3191 (1998).
- G. R. Magelssen, N. D. Delamater, E. L. Lindman, and A. A. Hauer, "Measurements of Early Time Radiation Asymmetry in Vacuum and Methane-Filled Hohlraums with the Reemission Ball Technique," *Physical Review E* 57, 4663 (1998).
- F. J. Marshall, M. M. Allen, J. P. Knauer, J. A. Oertel, and T. Archuleta, "A High-Resolution X-Ray Microscope for Laser-Driven Planar-Foil Experiments," *Physics of Plasmas* 5, 1118 (1998).
- R. J. Mason, R. A. Kopp, H. X. Vu, D. C. Wilson, S. R. Goldman, R. G. Watt, M. Dunne, and O. Willi, "Computational Study of Laser Imprint Mitigation in Foam-Buffered Inertial Confinement Fusion Targets," *Physics of Plasmas* 5, 211 (1998).
- A. O. Mateos, D. Androic, G. Backenstoss, D. Bosnar, H. Breuer, H. Dobbeling, T. Dooling, M. Furic, P. A. M. Gram, N. K. Gregory, A. Hoffart, Q. Ingram, A. Klein, K. Koch, J. Kohler, B. Kotlinski, M. Kroedel, G. Kyle, A. Lehmann, K. Michaelian, T. Petkovic, M. Planinic, R. P. Redwine, D. Rowntree, U. Sennhauser, N. Simicevic, R. Trezeciak, H. Ullrich, M. Wang, M. H. Wang, H. J. Weyer, M. Wildi, and K. E. Wilson, "Total and Partial Pion Absorption Cross-Sections on ${}^4\text{He}$ in the Δ -Resonance Region," *Physical Review C* 58, 942 (1998).
- G. B. Mills, "Neutrino Oscillation Results from LSND," *Nuclear Physics B* 66, 382 (1998).
- D. S. Montgomery, B. B. Afeyan, J. A. Cobble, J. C. Fernández, M. D. Wilke, S. H. Glenzer, R. K. Kirkwood, B. J. MacGowan, J. D. Moody, E. L. Lindman, D. H. Munro, B. H. Wilde, H. A. Rose, D. F. DuBois, B. Bezzerides, and H. X. Vu, "Evidence of Plasma Fluctuations and their Effect on the Growth of Stimulated Brillouin and Stimulated Raman-Scattering in Laser Plasmas," *Physics of Plasmas* 5, 1973 (1998).
- C. L. Morris, J. D. Zumbro, J. A. McGill, S. J. Seestrom, R. M. Whitton, C. M. Reidel, A. L. Williams, M. R. Braunstein, M. D. Kohler, B. J. Kriss, S. Hoibraten, J. Ouyang, R. J. Peterson, and J. E. Wise, "Evidence for Δ^- Components in Nuclei," *Physics Letters B* 419, 25 (1998).
- J. C. Mosher and R. M. Leahy, "Recursive Music: A Framework for EEG and MEG Source Localization," *IEEE Transactions On Biomedical Engineering* 45, 1342 (1998).

- T. J. Murphy, J. A. Oertel, T. N. Archuleta, C. W. Barnes, R. J. Bartlett, R. R. Berggren, S. B. Boggs, S. E. Caldwell, R. E. Chrien, J. A. Cobble, B. H. Failor, J. R. Faulkner, J. C. Fernández, A. A. Hauer, G. Idzorek, J. L. Jimerson, K. A. Klare, G. A. Kyrala, R. D. Little, L. Looney, D. Montgomery, R. A. Schmell, T. J. Sedillo, W. K. Thorn, R. G. Watt, and M. D. Wilke, "Recent Diagnostic Development for Inertial Confinement Fusion Research at Los Alamos National Laboratory," *Plasma Physics Reports* 24, 123 (1998).
- T. J. Murphy, J. M. Wallace, N. D. Delamater, C. W. Barnes, P. Gobby, A. A. Hauer, E. L. Lindman, G. Magelssen, J. B. Moore, J. A. Oertel, R. Watt, O. L. Landen, P. Amendt, M. Cable, C. Decker, B. A. Hammel, J. A. Koch, L. J. Suter, R. E. Turner, R. J. Wallace, F. J. Marshall, D. Bradley, R. S. Craxton, R. Keck, J. P. Knauer, R. Kremens, and J. D. Schnittman, "Experiments with Multiple-Beam Cones on the Omega-Laser Facility," *Physical Review Letters* 81, 108 (1998).
- T. J. Murphy, J. M. Wallace, N. D. Delamater, C. W. Barnes, P. Gobby, A. A. Hauer, E. L. Lindman, G. Magelssen, J. B. Moore, J. A. Oertel, R. Watt, O. L. Landen, P. Amendt, M. Cable, C. Decker, B. A. Hammel, J. A. Koch, L. J. Suter, R. E. Turner, R. J. Wallace, F. J. Marshall, D. Bradley, R. S. Craxton, R. Keck, J. P. Knauer, R. Kremens, and J. D. Schnittman, "Indirect Drive Experiments utilizing Multiple-Beam Cones in Cylindrical Hohlraums on Omega," *Physics of Plasmas* 5, 1960 (1998).
- G. A. Navratil, C. Cates, M. E. Mauel, D. Maurer, D. Nadle, E. Taylor, Q. Xiao, W. A. Reass, and G. A. Wurden, "Active Control of 2/1 Magnetic Islands in a Tokamak," *Physics of Plasmas* 5, 1855 (1998).
- G. U. Nienhaus, K. Chu, and K. Jesse, "Structural Heterogeneity and Ligand-Binding in Carbonmonoxy Myoglobin Crystals at Cryogenic Temperatures," *Biochemistry* 37, 6819 (1998).
- E. A. Pasyuk, C. L. Morris, J. L. Ullmann, J. D. Zumbro, L. W. Kwok, J. L. Matthews, and Y. Tan, "A Search For Δ^- and Δ^{++} Wave-Function Components in Light-Nuclei using the $(\pi^+, \pi^- p)$ and $(N, 2p)$ Reactions," *Acta Physica Polonica B* 29, 2335 (1998).
- T. S. Peat, J. Newman, G. S. Waldo, J. Berendzen, and T. C. Terwilliger, "Structure of Translation Initiation-Factor 5a from Pyrobaculum-Aerophilum at 1.75 Angstrom Resolution," *Structure* 6, 1207 (1998).
- J.-C. Peng, G. T. Garvey, T. C. Awes, M. E. Beddo, M. L. Brooks, C. N. Brown, J. D. Bush, T. A. Carey, T. H. Chang, W. E. Cooper, C. A. Gagliardi, D. F. Geesaman, E. A. Hawker, X. C. He, L. D. Isenhower, S. B. Kaufman, D. M. Kaplan, P. N. Kirk, D. D. Koetke, G. Kyle, D. M. Lee, W. M. Lee, M. J. Leitch, N. Makins, P. L. McGaughey, J. M. Moss, B. A. Mueller, P. M. Nord, B. K. Park, V. Papavassiliou, G. Petitt, P. E. Reimer, M. E. Sadler, P. W. Stankus, W. E. Sondheim,

T. N. Thompson, R. S. Towell, R. E. Tribble, M. A. Vasiliev, Y. C. Wang, Z. F. Wang, J. C. Webb, J. L. Willis, D. K. Wise, and G. R. Young, “ \bar{d}/\bar{u} Asymmetry and the Origin of the Nucleon Sea,” *Physical Review D* 58, 092004 (1998).

V. V. Platonov, O. M. Tatsenko, A. I. Bykov, M. I. Dolotenko, J. C. Solem, C. M. Fowler, J. D. Goettee, D. Rickel, L. J. Campbell, L. Veeser, M. Sheppard, A. H. Lacerda, J. C. King, P. J. Rodriguez, D. E. Bartram, R. G. Clark, B. E. Kane, A. S. Dzurak, G. R. Facer, N. Miura, T. Takamasu, H. Nakagawa, H. Yokoi, J. S. Brooks, L. W. Engel, L. Pfeiffer, K. W. West, A. W. Maverick, L. G. Butler, W. Lewis, C. H. Gallegos, and B. Marshall, “The Faraday-Effect in $Cd_{0.57}Mn_{0.43}Te$ in High Magnetic-Field,” *Physica B* 246, 319 (1998).

D. C. Rislove, C. E. M. Strauss, H. C. Bryant, M. S. Gulley, D. J. Funk, X. M. Zhao, and W. A. Miller, “Characterization of the D-1(E) Autodetaching Resonance in H- and D,” *Physical Review A* 58, 1889 (1998).

J. A. R. Samson, W. C. Stolte, Z. X. He, J. N. Cutler, Y. Lu, and R. J. Bartlett, “Double Photoionization of Helium,” *Physical Review A* 57, 1906 (1998).

K. F. Schoenberg, R. A. Gerwin, R. W. Moses, J. T. Scheuer, and H. P. Wagner, “Magnetohydrodynamic Flow Physics of Magnetically Nozzled Plasma Accelerators with Applications to Advanced Manufacturing,” *Physics of Plasmas* 5, 2090 (1998).

S. J. Seestrom, J. D. Bowman, B. E. Crawford, P. P. J. Delheij, C. M. Frankle, C. R. Gould, D. G. Haase, M. Iinuma, J. N. Knudson, P. E. Koehler, L. Y. Lowie, A. Masaike, Y. Masuda, Y. Matsuda, G. E. Mitchell, S. I. Penttilä, Y. P. Popov, H. Postma, N. R. Roberson, E. I. Sharapov, H. M. Shimizu, D. A. Smith, S. L. Stephenson, Y.-F. Yen, and V. W. Yuan, “Parity Nonconservation in Neutron-Capture on Cd-113,” *Physical Review C* 58, 2977 (1998).

G. S. Selwyn, C. A. Weiss, F. Sequeda, and C. Huang, “In-Situ Analysis of Particle Contamination in Magnetron Sputtering Processes,” *Thin Solid Films* 317, 85 (1998).

M. Shiozawa, B. Viren, Y. Fukuda, T. Hayakawa, E. Ichihara, K. Inoue, K. Ishihara, H. Ishino, Y. Itow, T. Kajita, J. Kameda, S. Kasuga, K. Kobayashi, Y. Kobayashi, Y. Koshio, M. Miura, M. Nakahata, S. Nakayama, A. Okada, M. Oketa, K. Okumura, M. Ota, N. Sakurai, Y. Suzuki, Y. Takeuchi, Y. Totsuka, S. Yamada, M. Earl, A. Habig, E. Kearns, M. D. Messier, K. Scholberg, J. L. Stone, L. R. Sulak, C. W. Walter, M. Goldhaber, T. Barszczak, W. Gajewski, P. G. Halverson, J. Hsu, W. R. Kropp, L. R. Price, F. Reines, H. W. Sobel, M. R. Vagins, K. S. Ganezer, W. E. Keig, R. W. Ellsworth, S. Tasaka, J. W. Flanagan, A. Kibayashi, J. G. Learned, S. Matsuno, V. Stenger, D. Takemori, T. Ishii,

- J. Kanzaki, T. Kobayashi, K. Nakamura, K. Nishikawa, Y. Oyama, A. Sakai, M. Sakuda, O. Sasaki, S. Echigo, M. Kohama, A. T. Suzuki, T. J. Haines, E. Blaufuss, R. Sanford, R. Svoboda, M. L. Chen, Z. Conner, J. A. Goodman, G. W. Sullivan, M. Mori, J. Hill, C. K. Jung, K. Martens, C. Mauger, C. McGrew, E. Sharkey, C. Yanagisawa, W. Doki, T. Ishizuka, Y. Kitaguchi, H. Koga, K. Miyano, H. Okazawa, C. Saji, M. Takahata, A. Kusano, Y. Nagashima, M. Takita, T. Yamaguchi, M. Yoshida, S. B. Kim, M. Etoh, K. Fujita, A. Hasegawa, T. Hasegawa, S. Hatakeyama, T. Iwamoto, T. Kinebuchi, M. Koga, T. Maruyama, H. Ogawa, A. Suzuki, F. Tsushima, M. Koshiba, M. Nemoto, K. Nishijima, T. Futagami, Y. Hayato, Y. Kanaya, K. Kaneyuki, Y. Watanabe, D. Kielczewska, R. Doyle, J. George, A. Stachyra, L. Wai, J. Wilkes, and K. Young, "Search for Proton Decay via $p^- e^+ \pi^0$ in a Large Water Cherenkov Detector," *Physical Review Letters* 81, 3319 (1998).
- P. A. Souder, P. L. Bogorad, E. J. Brash, G. D. Cates, W. J. Cummings, A. Gorelov, M. D. Hasinoff, O. Häusser, K. Hicks, R. Holmes, J. C. Huang, K. S. Kumar, B. Larson, W. Lorenzon, J. McCracken, P. Michaux, H. Middleton, E. Saettler, D. Siegel, D. Tupa, X. Wang, and A. Young, "Laser Polarized Muonic ${}^3\text{He}$ and Spin-Dependent μ^- Capture," *Nuclear Instruments and Methods in Physics Research A* 402, 311 (1998).
- P. Staples and K. Morley, "Neutron-Induced Fission Cross-Section Ratios for Pu-239, Pu-240, Pu-242, and Pu-244 Relative to U-235 from 0.5 to 400 MeV," *Nuclear Science and Engineering* 129, 149 (1998).
- S. L. Stephenson, J. D. Bowman, B. E. Crawford, P. P. J. Delheij, C. M. Frankle, M. Inuma, J. N. Knudson, L. Y. Lowie, A. Masaike, Y. Matsuda, G. E. Mitchell, S. I. Penttilä, H. Postma, N. R. Roberson, S. J. Seestrom, E. I. Sharapov, Y.-F. Yen, and V. W. W. Yuan, "Parity Nonconservation in Neutron Resonances in Th-232," *Physical Review C* 58, 1236 (1998).
- T. C. Terwilliger, G. Waldo, T. S. Peat, J. M. Newman, K. Chu, and J. Berendzen, "Class-Directed Structure Determination: Foundation for a Protein-Structure Initiative," *Protein Science* 7, 1851 (1998).
- W. Tornow, T. S. Carman, Q. Chen, W. R. Gibbs, B. F. Gibson, D. E. G. Trotter, C. R. Howell, A. H. Hussein, G. Mertens, C. F. Moore, C. Morris, A. Obst, E. Paszuk, C. D. Roper, F. Salinas, D. Schmidt, H. R. Setze, I. Slaus, S. Sterbenz, H. Tang, R. L. Walter, C. R. Whiteley, H. Witala, and Z. Zhou, "Scattering Length Measurements from Radiative Pion Capture and Neutron-Deuteron Breakup," *Nuclear Physics A* 631, C421 (1998).
- Y. Tosaka, S. Satoh, T. Itakura, H. Ehara, T. Ueda, G. A. Woffinden, and S. A. Wender, "Measurement and Analysis of Neutron-Induced Soft Errors in Sub-Half-Micron CMOS Circuits," *IEEE Transactions on Electron Devices* 45, 1453 (1998).

- M. Tuszewski, "Particle and Heat-Transport in a Low-Frequency Inductively-Coupled Plasma," *Physics Of Plasmas* 5, 1198 (1998).
- A. M. Urnov, J. Dubau, A. Ya Faenov, T. A. Pikuz, I. Y. Skobelev, J. Abdallah, R. E. H. Clark, J. Cohen, R. P. Johnson, G. A. Kyrala, M. D. Wilke, and A. L. Osterheld, "X-Ray-Spectra of Multiply-Charged Hollow Ions in the Emission from a Femtosecond Laser-Plasma," *JETP Letters* 67, 489 (1998).
- J. R. Walston, C. D. Keith, C. R. Gould, D. G. Haase, B. W. Raichle, M. L. Seely, W. Tornow, W. S. Wilburn, G. W. Hoffmann, and S. I. Penttilä, "Polarization Transfer in the $^3\text{H}(\vec{p}, \vec{n})^3\text{He}$ Reaction and the 0^- Level in ^4He ," *Physical Review C* 58, 1314 (1998).
- K. C. Walter, M. Nastasi, N. P. Baker, C. P. Munson, W. K. Scarborough, J. T. Scheuer, B. P. Wood, J. R. Conrad, K. Sridharan, S. Malik, and R. A. Bruen, "Advances in PSII Techniques for Surface Modification," *Surface and Coatings Technology* 104, 205 (1998).
- G. Wang, K. Kwiatkowski, D. S. Bracken, E. Foxford, W.-C. Hsi, R. G. Korteling, R. Legrain, K. B. Morley, E. C. Pollacco, V. E. Viola, and C. Volant, "Time Scale for Emission of Soft Ejectiles in the Disassembly of Hot Nuclei," *Physics Review C* 57, R2786 (1998).
- R. G. Watt, J. Duke, C. J. Fontes, P. L. Gobby, R. V. Hollis, R. A. Kopp, R. J. Mason, D. C. Wilson, C. P. Verdon, T. R. Boehly, J. P. Knauer, D. D. Meyerhofer, V. Smalyuk, R. P. J. Town, A. Iwase, and O. Willi, "Laser Imprint Reduction using a Low-Density Foam Buffer as a Thermal Smoothing Layer at 351-nm Wavelength," *Physical Review Letters* 81, 4644 (1998).
- A. G. White, J. R. Mitchell, O. Nairz, and P. G. Kwiat, "Interaction-Free Imaging," *Physical Review A* 58, 605 (1998).
- W. S. Wilburn and J. D. Bowman, "Consistency of Parity-Violating Pion-Nucleon Couplings Extracted from Measurements in F-18 and Cs-133," *Physical Review C* 57, 3425 (1998).
- W. S. Wilburn, C. R. Gould, G. M. Hale, P. R. Huffman, C. D. Keith, N. R. Roberson, and W. Tornow, "Measurements at Low Energies of the Polarization-Transfer Coefficient K-Y(Y') for the Reaction $^3\text{H}(\vec{p}, \vec{n})^3\text{He}$ at 0° ," *Few-Body Systems* 24, 27 (1998).
- D. C. Wilson, P. A. Bradley, N. M. Hoffman, F. J. Swenson, D. P. Smitherman, R. E. Chrien, R. W. Margevicius, D. J. Thoma, L. R. Foreman, J. K. Hoffer, S. R. Goldman, S. E. Caldwell, T. R. Dittrich, S. W. Haan, M. M. Marinak, S. M. Pollaine, and J. J. Sanchez, "The Development and Advantages of Beryllium Capsules for the National Ignition Facility," *Physics of Plasmas* 5, 1953 (1998).

1997 Conferences

B. P. Wood, A. J. Perry, L. J. Bitteker, and W. J. Waganaar, "Cratering Behavior in Single-Crystalline and Polycrystalline Copper Irradiated by an Intense Pulsed Ion-Beam," *Surface and Coatings Technology* 109, 171 (1998).

J. Abdallah, Jr., M. D. Wilke, G. A. Kyrala, R. E. H. Clark, A. Ya Faenov, and T. A. Faenov, "Hot Electron Effects on the Satellite Spectrum of Laser Produced Plasmas," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).

K. H. Adams, K. R. Alrick, J. F. Amann, J. G. Boissevain, M. L. Crow, S. B. Cushing, J. C. Eddleman, C. J. Espinoza, T. T. Fife, R. A. Gallegos, J. J. Gomez, T. J. Gorman, N. T. Gray, G. E. Hogan, V. H. Holmes, Jr., S. A. Jaramillo, N. S. P. King, J. N. Knudson, R. K. London, R. P. Lopez, J. B. McClelland, F. E. Merrill, K. B. Morley, C. L. Morris, C. T. Mottershead, K. H. Mueller, D. M. Numkena, P. Pazuchanics, C. Pillai, C.-M. Riedel, J. S. Sarracino, H. L. Stacy, B. E. Takala, H. E. Tucker, G. J. Yates, H.-J. Ziock, J. D. Zumbro, E. Ables, M. E. Aufderheide, P. D. Barnes, R. M. Bionta, D. H. Fujino, E. P. Hartouni, S. S. Park, and R. Soltz, "Proton Radiography Concept," Semiconductor Tracking Detectors (Melbourne, Australia, December 1997).

C. J. Aine, H. W. Chen, D. Ranken, J. Mosher, E. Best, J. George, J. Lewine, and K. Paulson, "An Examination of Chromatic/Achromatic Stimuli Presented to Central/Peripheral Visual Fields: An MEG Study," 3rd International Conference on Functional Mapping of the Human Brain (Copenhagen, Denmark, May 1997), abstract in *Neuroimage* 5, 153 (1997).

C. J. Aine, D. Ranken, M. Huang, J. C. Mosher, E. Best, J. George, and J. Lewine, "Retinotopy of Cingulate Cortex? An MEG Study," 3rd International Conference on Functional Mapping of the Human Brain (Copenhagen, Denmark, May 1997), abstract in *Neuroimage* 5, 152 (1997).

J. F. Amann, L. G. Atencio, C. J. Espinoza, J. J. Gomez, G. W. Hart, R. E. Hill, G. E. Hogan, S. A. Jaramillo, N. S. P. King, L. J. Marek, J. B. McClelland, K. B. Morley, C. L. Morris, C. T. Mottershead, K. H. Mueller, P. Pazuchanics, J. S. Sarracino, G. J. Yates, H.-J. Ziock, J. D. Zumbro, A. Saunders, J. M. O'Donnell, E. P. Hartouni, R. Prigl, and E. T. Schwaner, "High-Energy Test of Proton Radiography Concepts," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

M. Amman, J. F. Beche, E. Beuville, V. Douence, L. Fabris, F. Goulding, N. Madden, J. Millaud, B. Turko, J. Walton, J. Zaninovich, K. R. Alrick, R. A. Gallegos, J. E. Galyardt, N. T. Gray, G. E. Hogan, V. H. Holmes, Jr., S. A. Jaramillo, N. S. P. King, T. E. McDonald, K. B. Morley, C. L. Morris, D. M. Numkena, P. Pazuchanics, C.-M. Riedel, J. S. Sarracino, G. J. Yates, H.-J. Ziock, and J. D. Zumbro, "Detector Development for Dynamic Proton Radiography," Semiconductor Tracking Detectors (Melbourne, Australia, December 1997).

M. Amman, J. F. Beche, E. Beuville, V. Douence, L. Fabris, F. Goulding, N. Madden, J. Millaud, B. Turko, J. Walton, J. Zaninovich, R. A. Gallegos, J. E. Galyardt, T. E. McDonald, N. S. P. King, G. J. Yates, and H. Ziock, "Detector Systems for Proton Radiography," Front-End Electrons for High-Resolution Tracking Detectors (Taos, New Mexico, November 1997).

D. E. Archer, J. A. Becker, L. A. Bernstein, W. Younes, D. M. Drake, G. D. Johns, and R. O. Nelson, "Capabilities of GEANIE at LANSCE/WNR: Spectroscopy of 238U," American Physical Society/AAPT Meeting (Washington, D.C., April 1997).

W. L. Atchison, R. J. Faehl, D. V. Morgan, and R. E. Reinovsky, "Examination of Instability Growth in Solid Liner Surfaces using Comparison of Two-Dimensional MHD Calculations and Measured Data," Dense Z-Pinches (Vancouver, Canada, May 1997).

A. Babushkin, W. Bittle, S. A. Letzring, A. Okishev, M. D. Skeldon, W. Seka, C. R. Pollock, and W. R. Bosenberg, "Stable, Reproducible, and Externally Synchronizable Regenerative Amplifier for Shaped Optical Pulses for the OMEGA Laser System," Topical Meeting on Advanced Solid State Lasers (Orlando, Florida, January 1997), *OSA Trends in Optics and Photonics Series* 10, 106 (1997).

A. Babushkin, W. Seka, W. Bittle, S. A. Letzring, and M. D. Skeldon, "Ultrastable, Reliable Flash-Lamp Pumped and Negative Feedback Controlled Regenerative Amplifier for the OMEGA Laser Pulse-Shaping System," Conference on Lasers and Electro-Optics (CLEO '97) (Baltimore, Maryland, May 1997), *CLEO '97 Technical Digest Series* (1997).

A. Babushkin, W. Seka, S. A. Letzring, W. Bittle, C. T. Cotton, M. Labuzeta, M. Miller, and R. G. Rhodes, "Fiducial Laser for the OMEGA Laser System," Conference on Lasers and Electro-Optics (CLEO '97) (Baltimore, Maryland, May 1997), *CLEO '97 Technical Digest Series* (1997).

A. Babushkin, W. Seka, S. A. Letzring, W. Bittle, M. Labuzeta, M. Miller, and R. G. Rhodes, "Multicolor Fiducial Laser for Streak Cameras and Optical Diagnostics for the OMEGA Laser System," 22nd International Congress on High-Speed Photography and Photonics (Santa Fe, New Mexico, October–November 1996), *SPIE Proceedings* 2869, 540 (1997).

- D. A. Baker and J. A. Phillips, "An Overview of Reversed-Field Pinch Research," 2nd International Symposium on Evaluation of Current Trends in Fusion Research (Washington, D.C., March 1997), *Proceedings of the 2nd International Symposium on Evaluation of Current Trends in Fusion Research* (Plenum Press, 1997).
- C. W. Barnes, J. B. Beck, P. L. Gobby, W. W. Hsing, N. M. Hoffman, H. N. Kornblum, T. J. Orzechoowski, D. Galmiche, and A. Richard, "Analysis of the Rayleigh-Taylor Instability in Cylindrical Convergent Geometry using Indirect Drive," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May-June 1997).
- C. W. Barnes, J. B. Beck, N. M. Hoffman, W. W. Hsing, D. Galmiche, and A. Richard, "Nonlinear Mode Coupling in Cylindrical Implosions," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- C. W. Barnes and H. A. Davis, "High Power Pulsed Diagnostic Neutral Beam," Design of ITER Diagnostic Systems (San Diego, California, February 1997).
- C. W. Barnes, D. L. Jassby, G. L. LeMunyan, A. L. Roquemore, and C. Walker, "Design Considerations for Neutron Activation and Neutron Source Strength Monitors for ITER," Diagnostics for Experimental Fusion Reactions (Varenna, Italy, September 1997).
- D. C. Barnes, R. A. Nebel, M. M. Schauer, and M. M. Pickrel, "Inertial Electro-Magnetostatic Plasma Neutron Sources," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- D. C. Barnes, M. M. Schauer, T. B. Mitchell, R. A. Nebel, and F. L. Ribe, "Dense Nonneutral Plasmas and Fusion Applications," Nonneutral Plasmas (Boulder, Colorado, July 1997).
- J. B. Beck, W. W. Hsing, C. W. Barnes, and N. M. Hoffman, "Rayleigh-Taylor Growth of Unstable Perturbations in Ablatively Driven Cylindrical Implosions," Laser Interactions and Related Plasma Phenomena (Monterey, California, April 1997).
- J. F. Benage, Jr., G. A. Kyrala, J. Workman, and T. Tierney, "Measuring the EOS of a Dense, Strongly Coupled Plasma; Description of the Technique," Strongly Coupled Coulomb Systems (Boston, Massachusetts, August 1997).
- J. F. Benage, Jr., G. A. Kyrala, J. Workman, and T. Tierney, "Measuring the EOS of a Dense, Strongly Coupled Plasma: Description of the Technique and Preliminary Results," Boston College Seminar (Boston, Massachusetts, August 1997).

J. F. Benage, Jr., F. J. Wysocki, R. Bowers, H. Oona, W. Broste, R. Harper, and N. Roderick, "Experiments on Planar Plasma Flow Switches at Los Alamos," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1233 (1997).

R. R. Berggren and R. A. Schmell, "Pad Polishing for Rapid Production of Large Flats," Optical Manufacturing and Testing II (San Diego, California, July 1997), *SPIE Proceedings* 3134, 252 (1997).

B. Bezzrides, D. S. Montgomery, H. X. Vu, J. M. Wallace, and B. H. Wilde, "Postprocessor for Brillouin and Raman Convective Gain," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).

R. L. Bolvin, M. Koltonyuk, C. P. Munson, and R. M. Mayo, "Time-of-Flight Neutral Particle Analyzer for Alcator C-Mod," 11th Topical Conference on High-Temperature Plasma Diagnostics (Monterey, California, May 1996), *Review of Scientific Instruments* 68, 982 (1997).

D. W. Bowman, G. A. Bennett, F. A. Biehl, J. C. Cochrane, R. F. Gribble, J. R. Griego, R. D. Hicks, W. B. Hinckley, K. W. Hosack, R. J. Kasik, E. A. Lopez, W. A. Reass, H. R. Salazar, G. M. Sandoval, D. W. Scudder, M. C. Thompson, W. M. Parsons, "Design of the Atlas 240 kV Marx Modules," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 498 (1997).

G. E. Busch, C. J. Hewitt, W. T. Leland, D. K. Remelius, T. Shimada, C. E. M. Strauss, D. C. Thompson, and C. W. Wilson, "Acousto-Optically Tuned Isotopic CO₂ Lasers for Long-Range Differential Absorption Lidar," Conference on Lasers and Electro-Optics (CLEO '97) (Baltimore, Maryland, May 1997), *CLEO '97 Technical Digest Series* 11, 188 (1997).

G. E. Busch, W. T. Leland, D. K. Remelius, T. Shimada, C. E. M. Strauss, D. C. Thompson, C. W. Wilson, and T. J. Zaugg, "High-Repetition-Rate Rapid-Tuning CO₂ Laser Development," CALIOPE (Livermore, California, February 1997).

S. E. Caldwell, S. R. Goldman, W. W. Hsing, D. J. Thoma, M. D. Wilke, and D. C. Wilson, "Shock Front Evolution in Non-Uniform Materials," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

S. E. Caldwell, S. R. Goldman, M. D. Wilke, and D. C. Wilson, "Effect of Joints and Gaps on Shock Propagation," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).

A. Castro and J. Williams, "Ultrasensitive, Direct Detection of Specific Target Genes," Single Molecule Detection (Berlin, Germany, September 1997).

H.-W. Chen, C. J. Aine, E. Flynn, and C. C. Wood, "Spatial Frequency Tuning Functions and Contrast Sensitivity at Different Eccentricities of Visual Field," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).

H.-W. Chen, C. J. Aine, E. Flynn, and C. C. Wood, "Spatio-Temporal Interactions in Human Vision using Transient and M-Sequence Stimuli," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).

V. K. Chernyshev, V. N. Mokhov, V. N. Buzin, O. M. Burenkov, A. M. Bujko, V. V. Vakhrushev, S. F. Garanin, B. E. Grinevich, Y. N. Gorbachev, V. A. Demidov, V. I. Dudoladov, V. V. Zmushko, A. I. Kuzyaev, A. I. Kucherov, B. M. Lovyagin, Y. I. Matsev, P. N. Nizovtsev, A. A. Petrukhin, A. I. Pishchurov, S. S. Sokolov, V. P. Solovjov, A. I. Startsev, V. B. Yakubov, B. A. Anderson, C. A. Ekdahl, D. Goforth, D. A. Clark, I. R. Lindemuth, R. E. Reinovsky, R. Fail, and S. M. Younger, "Study of High-Energy Liner Compression in HEL-1 Experiment," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), in *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 566 (1997).

R. E. Chrien, F. J. Swenson, B. H. Wilde, D. L. Peterson, W. Matuska, W. E. Anderson, G. Idzorek, J. L. Porter, R. Spielman, C. Deeney, G. A. Chandler, and D. L. Fehl, "Vacuum Hohlraum Experiments on PBFA-Z," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997), *Bulletin of the American Physical Society* 42, 1879 (1997).

D. A. Clark, B. G. Anderson, C. A. Ekdahl, R. J. Faehl, J. H. Goforth, I. R. Lindemuth, T. L. Peterson, R. E. Reinovsky, L. J. Tabaka, V. K. Chernyshev, V. N. Moknov, V. N. Buzin, O. M. Byrenkov, A. M. Bujko, V. V. Vakhrushev, S. F. Garanin, B. E. Grinevich, Y. N. Gorbachov, E. B. Gubkov, B. A. Demidov, V. I. Dudoladov, V. V. Zmushko, A. I. Kuzyaev, A. I. Kucherov, B. M. Lovyagin, Y. I. Matsev, P. N. Nizovtsev, A. A. Petrukhin, A. I. Pishurov, S. S. Sokolov, V. P. Solovjov, A. I. Startsev, and V. B. Yakubov, "High Energy Imploding Liner Experiment HEL-1: Experimental Results," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), in *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1369 (1997).

B. P. Cluggish and B. P. Wood, "Deposition of Metal Coatings on the Inside Surface of Pipes using a Cathodic Arc Plasma," 39th Annual

Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

B. P. Cluggish and B. P. Wood, "Transport of a Cathodic Arc Plasma Inside a Magnetized Tube," IEEE International Conference on Plasma Science (San Diego, California, May 1997).

J. A. Cobble, A. V. Bessarab, A. V. Kunin, V. A. Tokarev, and S. R. Goldman, "Radiation Temperature Measurements in Laser-Heated Hohlraums," 9th Topical Conference on High Temperature Plasma Diagnostics (St. Petersburg, Russia, June 1997), *Fizika Plazmy* 24, 208 (1998).

J. A. Cobble, R. P. Johnson, and R. J. Mason, "F Number Increase of a High-Intensity Green Laser Beam in a Plasma," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

M. D. Cooper, "New Ideas to Improve Searches for $\mu^+ \rightarrow e^+ \gamma$," Workshop on Physics at the First Muon Collider and at the Front End of a Muon Collider (Batavia, Illinois, November 1997), in *Proceedings of the Workshop on Physics at the First Muon Collider and at the Front End of a Muon Collider*, S. Geer and R. Raga, Eds. (AIP, New York, 1998).

M. D. Cooper, M. L. Brooks, G. E. Hogan, V. D. Laptev, R. E. Mischke, P. S. Cooper, Y. Chen, M. Dzemidzic, A. Empl, E. V. Hungerford, K. Lan, W. von Witsch, K. Stantz, J. J. Szymanski, C. A. Gagliardi, R. E. Tribble, D. D. Koetke, R. Manweiler, S. Stanislaus, K. O. H. Ziock, and L. E. Pillonen, "Lepton Flavor Violation," 6th Conference on the Intersections of Particle and Nuclear Physics (Big Sky, Montana, May 1997), in *Proceedings of the 6th Conference on the Intersections of Particle and Nuclear Physics*, T. W. Donnelly, Ed. (AIP, New York, 1998), p. 34.

B. E. Crawford, N. R. Roberson, S. J. Seestrom, C. M. Frankle, J. D. Bowman, S. I. Penttilä, A. Masaike, Y. Matsuda, T. Haseyama, E. I. Sharapov, and S. L. Stephenson, "Development of Apparatus for Capture g-Ray Studies of Parity Violation at Los Alamos," 4th International Seminar on Neutron-Nucleus Interactions (Dubna, Russia, 1997), in *Proceedings of the Forth International Seminar on Neutron-Nucleus Interactions* (JINR, Dubna, 1997), p. 268.

H. A. Davis, B. P. Wood, C. P. Munson, L. J. Bitteker, M. A. Nastasi, D. J. Rej, W. J. Waganaar, K. C. Walter, D. M. Coates, and H. M. Schleinitz, "Ion Beam and Plasma Technology Development for Surface Modification at Los Alamos National Laboratory," 4th IUMRS International Conference in Asia (Chiba, Japan, September 1997), *Materials Chemistry and Physics* 54, 213 (1998).

- S. Davis, D. Barnes, T. Casper, R. Fonck, T. Fredian, T. Gibney, M. Greenwald, D. Greenwood, P. Henline, K. Keith, B. McHarg, W. Meyer, J. Moller, P. Roney, J. Stillerman, and G. A. Wurden, "Experiences with Remote Collaborations in Fusion Research," 17th IEEE/NPSS Symposium on Fusion Engineering (San Diego, California, October 1997).
- N. D. Delamater, E. L. Lindman, Jr., G. R. Magelssen, B. A. Failor, A. L. Richard, R. E. Chrien, R. Peterson, S. M. Pollaine, L. J. Suter, O. Landen, S. N. Dixit, J. B. Moore, V. Gomez, K. Gifford, and B. Hammel, "Symmetry Experiments in Gas Filled Hohlraums with Smooth Beams at Nova," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).
- B. G. de Volder, T. J. T. Kwan, R. D. Fulton, D. C. Moir, D. M. Oró, and D. S. Prono, "Computational and Experimental Studies of the Beam-Target Interaction for High-Dose, Multi-Pulse Radiography," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- M. A. Espy, "Other Options: SQUIDS," Workshop on a New Experiment for Measuring the Neutron's Electric Dipole Moment (Los Alamos, New Mexico, March 1997).
- R. J. Faehl, W. L. Atchison, R. E. Reinovsky, and D. V. Morgan, "Numerical and Experimental Studies of Magnetic Rayleigh-Taylor Instabilities in Solid Liners," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- A. Ya Faenov, J. Abdallah, R. E. H. Clark, Jr. , J. Cohen, R. P. Johnson, G. A. Kyrala, A. I. Magunov, T. A. Pikuz, I. Yu. Skobelev, and M. D. Wilke, "High-Resolution X-Ray Spectroscopy of Hollow Atoms Created in Plasma Heated by Subpicosecond Laser Radiation," Applications of X-Rays Generated from Lasers and Other Bright Sources (San Diego, California, July–August 1997), *SPIE Proceedings* 3157, 10 (1997).
- J. C. Fernández, B. S. Bauer, J. A. Cobble, D. F. DuBois, G. A. Kyrala, D. S. Montgomery, H. A. Rose, H. X. Vu, R. G. Watt, B. H. Wilde, M. D. Wilke, W. M. Wood, B. H. Failor, R. Kirkwood, and B. J. MacGowan, "Measurements of Laser-Plasma Instability Relevant to Ignition Hohlraums," 38th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Denver, Colorado, November 1996), *Physics of Plasmas* 4, 1849 (1997).
- J. C. Fernández, J. A. Cobble, D. S. Montgomery, H. A. Rose, and M. D. Wilke, "Stimulated Raman Scattering in a Long-Scale Hohlraum Plasma," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

- D. H. Fitzgerald, H. E. Ahn, B. Blind, M. J. Borden, R. J. Macek, F. Neri, C. R. Rose, H. A. Thiessen, C. A. Wilkinson, and M. V. Zumbro, "Overview and Status of the Los Alamos PSR Injection Upgrade Project," Particle Accelerator Conference (Vancouver, Canada, May 1997).
- E. Flynn, R. Bracht, R. H. Kraus, Jr., P. M. Maas, P. Ruminer, and M. Stettler, "A Digital-Signal-Processor (DSP) Flux-Locked Loop (FLL) for SQUIDs with Automatic Reset and Feedback Cancellation," *Biomag96: Advances in Biomagnetic Research* (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- J. R. Frigo, K. R. Moore, and M. W. Tilden, "A Novel Microsatellite Control System," International Workshop on Applications of Neural Networks to Telecommunications (Melbourne, Australia, June 1997).
- J. R. Frigo and M. W. Tilden, "Analog Neural Network Control Method Proposed for Use in a Backup Satellite Control Mode," Mobile Robots XII (Pittsburgh, Pennsylvania, October 1997), *SPIE Proceedings* 3210, 84 (1998).
- D. J. Funk, B. W. Asay, J. L. Mace, R. L. Rabie, B. I. Bennett, Jr., J. D. Bowman, V. W. Yuan, G. L. Morgan, R. M. Boat, L. M. Hull, B. F. Henson, R. S. Hixson, G. W. Laabs, D. M. Murk, H. L. Stacy, and C. E. Ragan, "Dynamic Measurement of Temperature using Neutron Resonance Spectroscopy (NRS)," Shock Compression of Condensed Matter (Amherst, July 1997).
- Gavron, K. Morley, C. Morris, S. Seestrom, J. Ullmann, G. Yates, and J. Zumbro, "High Energy Neutron Radiography," International Conference on Neutrons in Research and Industry (Crete, Greece, June 1997), *SPIE Proceedings* 2867, 326 (1997).
- J. S. George and M. X. Huang, "Cingulate Sources during Photosensitive Epileptic Discharges Observed with Magnetoencephalography," 3rd International Conference on Functional Mapping of the Human Brain (Copenhagen, Denmark, May 1997).
- J. S. George, D. M. Schmidt, J. C. Mosher, C. J. Aine, D. M. Ranken, C. C. Wood, J. D. Lewine, J. A. Sanders, and J. W. Belliveau, "Dynamic Neuroimaging by MEG, Constrained by MRI and fMRI," *Biomag96: Advances in Biomagnetic Research* (Santa Fe, New Mexico, February 1996), in *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- P. L. Gobby, D. J. Hatch, R. Manzanares, P. M. Brooks, H. Bush, Jr., J. E. Moore, V. M. Gomez, L. R. Foreman, J. M. Wallace, and T. J. Murphy, "Fabrication of Tetrahedral Hohlraums," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May-June 1997).

S. R. Goldman, C. W. Barnes, S. E. Caldwell, N. D. Delamater, W. W. Hsing, M. D. Wilke, D. C. Wilson, D. C. Wilson, M. Dunne, J. Edwards, P. Graham, and B. Thomas, "Target Joints in Cylindrical Geometry," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

S. R. Goldman, S. E. Caldwell, P. L. Gobby, W. W. Hsing, D. J. Thoma, R. P. Weaver, B. H. Wilde, M. D. Wilke, and D. C. Wilson, "Using Laser Drive to Probe the Physics of Structuring due to Target Defects," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

S. R. Goldman, S. E. Caldwell, W. W. Hsing, M. D. Wilke, and D. C. Wilson, "Target Joints in Cylindrical Geometry," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

S. R. Goldman, M. D. Wilke, D. C. Wilson, and S. E. Caldwell, "Effect of Fabrication Defects on Targets with Beryllium Based Ablators," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May-June 1997).

R. Guckert, V. D. Sandberg, D. Tupa, D. J. Vieira, and X. Zhao, "Progress towards Trapping ^{82}Rb in an Optical Trap," 213th American Chemical Society National Meeting (San Francisco, California, April 1996), *Abstracts of Papers from the 213th American Chemical Society National Meeting* 213, NUCL-69 (1997).

M. S. Gulley, M. H. Holzscheiter, P. Kwiat, V. Sandberg, M. M. Schauer, D. Tupa, and R. J. Hughes, "Experimental Work on Quantum Computation at Los Alamos National Laboratory," American Physical Society/AAPT Meeting (Washington, D.C., April 1997).

M. Gulley, X. M. Zhao, C. E. M. Strauss, D. J. Funk, G. A. Kyrala, W. B. Ingalls, H. C. Bryant, D. C. Rislove, W. A. Miller, and A. Stintz, "Nonresonant Two-Photon Detachment of H^- Ions with 1.17 eV Photons," American Physical Society/AAPT Meeting (Washington, D.C., April 1997).

J. E. Hammerberg, B. I. Bennett, Jr., C. E. Ragan, B. L. Holian, R. R. Critchfield, R. S. Hixson, J. E. Vorthman, and V. W. Yuan, "Dynamic Experiment for Interface Physics," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

B. Hasslacher and M. W. Tilden, "Theoretical Foundations for Nervous Networks and the Design of Living Machines," Workshop on Control Mechanisms for Complex Systems: Issues of Measurement and Semiotic Analysis.

A. A. Hauer, G. A. Kyrala, J. S. Wark, T. Boehly, B. Remington, and D. H. Kalantar, "Use of X-Ray Backlighting in the Study of Transient X-Ray Diffraction in Moderate Pressure Shocks," SPIE Optical Science, Engineering, and Instrumentation (San Diego, California, July 1997).

A. A. Hauer, J. S. Wark, D. Kalantar, B. Remington, R. Kopp, J. Cobble, B. Failor, G. Kyrala, M. Meyers, R. Springer, and T. Boehley, "Transient X-Ray Diffraction and Its Application to Materials Science and X-Ray Optics," Applications of X-Rays Generated from Lasers and Other Bright Sources (San Diego, California, July–August 1997), *SPIE Proceedings* 3157, 72 (1997).

L. Heller, M. Akhtari, and E. D. Best, "Dependence of EEG and MEG on Electric Conductivities," 3rd International Conference on Functional Mapping of the Human Brain (Copenhagen, Denmark, May 1997).

R. E. Hill, T. J. Bowles, S. J. Seestrom, T. O. Brun, and C. L. Morris, "Progress on Development of an Ultracold Neutron Source at the Los Alamos Neutron Science Center," Meeting of the Division of Nuclear Physics of the American Physical Society (Whistler, Canada, October 1997).

A. Hime, "Neutral-Current Detectors for the Sudbury Neutrino Observatory," Solar Neutrino Conference (Heidelberg, Germany, April 1997).

D. E. Hollowell, G. T. Schappert, R. P. Weaver, S. E. Caldwell, and W. W. Hsing, "Ablative Rayleigh-Taylor Instability Modeling," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

D. E. Hollowell, G. T. Schappert, R. P. Weaver, S. E. Caldwell, and W. W. Hsing, "Ablative Rayleigh-Taylor Instability Modeling," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).

M. H. Holzscheiter, G. Bendiscioli, A. Bertin, G. Bollen, M. Bruschi, C. Cesar, M. Charlton, M. Corradini, D. DePedis, M. Doser, J. Eades, R. Fedele, X. Feng, F. Galluccio, T. Goldman, J. S. Hangst, R. Hayano, D. Horvath, R. J. Hughes, N. S. P. King, K. Kirsebom, H. Knudsen, V. Lagomarsino, R. Landua, G. Laricchia, R. A. Lewis, E. Lodi Rizzini, M. Macri, G. Manuzio, U. Marconi, M. R. Masullo, J. P. Merrison, S. P. Möller, G. L. Morgan, M. M. Nieto, M. Piccirini, R. Poggiani, A. Rotondi, G. Rouleau, P. Salvini, N. Semprini-Cesari, G. A. Smith, C. M. Surko, G. Testera, G. Torelli, E. Uggerhøj, V. G. Vaccaro, L. Venturelli, A. Vitale, E. Widmann, T. Yamazaki, Y. Yamazaki, D. Zanello, and A. Zoccoli, "Antihydrogen Production and Precision Experiments," Antimatter Gravity and Antihydrogen Spectroscopy International Workshop (Sepino, Italy, May 1996), *Hyperfine Interactions* 109, 1 (1997).

- M. H. Holzscheiter, G. Bendiscioli, A. Bertin, G. Bollen, M. Bruschi, C. Cesar, M. Charlton, M. Corradini, D. DePedis, M. Doser, J. Eades, R. Fedele, X. Feng, F. Galluccio, T. Goldman, J. S. Hangst, R. Hayano, D. Horvath, R. J. Hughes, N. S. P. King, K. Kirsebom, H. Knudsen, V. Lagomarsino, R. Landua, G. Laricchia, R. A. Lewis, E. Lodi Rizzini, M. Macri, G. Manuzio, U. Marconi, M. R. Masullo, J. P. Merrison, S. P. Møller, G. L. Morgan, M. M. Nieto, M. Piccinini, R. Poggiani, A. Rotondi, G. Rouleau, P. Salvini, N. Semprini-Cesari, G. A. Smith, C. M. Surko, G. Testera, G. Torelli, E. Uggerhøj, V. G. Vaccaro, L. Venturelli, A. Vitale, E. Widmann, T. Yamazaki, Y. Yamazaki, D. Zanello, and A. Zoccoli, "Antihydrogen Production and Precision Experiments," 4th Biennial Conference on Low Energy Antiproton Physics (Dinkelsbuhl, Germany, August 1996), *Nuclear Physics B* 56, 336 (1997).
- W. W. Hsing, C. W. Barnes, J. B. Beck, N. M. Hoffman, D. Galmiche, A. Richard, J. Edwards, P. Graham, S. Rothman, and B. Thomas, "Rayleigh-Taylor Instability Evolution in Ablatively Driven Cylindrical Implosions," 38th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Denver, Colorado, November 1996), *Physics of Plasmas* 4, 1832 (1997).
- W. W. Hsing, S. E. Caldwell, S. R. Goldman, and R. P. Weaver, "Shock Propagation in the Nonlinear Regime," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- M. Huang and L. Heller, "One Effect of a Maximum Possible Current Strength," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- M. Huang and J. C. Mosher, "A Novel Head Model for the MEG Forward Problem: BEM Accuracy with Only Spherical Model Complexity," 3rd International Conference on Functional Mapping of the Human Brain (Copenhagen, Denmark, 1997), abstract in *Neuroimage* 5, 441 (1997).
- M. Huang, J. C. Mosher, R. M. Leahy, M. E. Spencer, and C. C. Wood, "Comparing the Accuracy of EEG and MEG Source Localization using a Human Skull Phantom," 27th Annual Meeting of the Society for Neuroscience (New Orleans, Louisiana, October 1997).
- M. Huang, S. Supek, and C. Aine, "Multi-Source Localization in MEG using Simulated Annealing: Model Order Determination and Parameter Accuracy," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- R. J. Hughes, "Secure Communications Using Quantum Cryptography," Photonic Quantum Computing (Orlando, Florida, April 1997), *SPIE*

Proceedings 3076, 2 (1997); *SPIE Newsletters* 8 (1997); and *OE Reports* 164, 12 (1997).

R. J. Hughes and D. F. James, "Prospects for Quantum Computation with Trapped Ions," Fundamental Problems in Quantum Theory (Baltimore, Maryland, August 1997).

R. J. Hughes, G. G. Luther, G. L. Morgan, C. G. Peterson, and C. M. Simmons, "Quantum Cryptography Over 24 km of Underground Optical Fibers," American Physical Society/AAPT Meeting (Washington, D.C., April 1997).

D. Hywel White, A. Ajduk, and A. K. Wroblewski, "LSND Neutrino Oscillation Results," 28th International Conference on High-Energy Physics (Warsaw, Poland, July 1996).

G. C. Idzorek and R. J. Bartlett, "Silicon Photodiode Characterization from 1 eV to 10 keV," SPIE Optical Science, Engineering, and Instrumentation (San Diego, California, July 1997).

G. C. Idzorek and R. J. Bartlett, "Silicon Photodiode Soft X-Ray Detectors," IEEE International Conference on Plasma Science (San Diego, California, May 1997).

G. C. Idzorek and R. J. Bartlett, "Silicon Photodiode Soft X-Ray Detectors for Pulsed Power Experiments," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1274 (1997).

G. C. Idzorek and H. Oona, "Soft X-Ray Diagnostics for MAGO Experiments," Innovative Confinement Concepts Workshop (Marina del Rey, California, March 1997).

D. F. V. James, R. J. Hughes, E. H. Knill, R. Laflamme, and A. G. Petschek, "Decoherence Bounds on the Capabilities of Cold Trapped Ion Quantum Computers," Photonic Quantum Computing (Orlando, Florida, April 1997), *SPIE Proceedings* 3076, 42 (1997).

L. C. Johnson, C. W. Barnes, K. Ebisawa, A. V. Krasilnikov, F. B. Markus, T. Nishitani, G. J. Sadler, and C. Walker, "Overview of Fusion Product Diagnostics for ITER," Diagnostics for Thermonuclear Reactors (Varenna, Italy, September 1997).

J. S. Kapustinsky, J. G. Boissevain, E. J. Bosze, D. J. Clark, D. M. Jaffe, S. Y. Kim, L. J. Marek, J. Simon-Gillo, J. P. Sullivan, H. W. van Hecke, and G. Xu, "Double-Metal Silicon Pad Design for the Phenix Multiplicity/Vertex Detector," Frontier Detectors for Frontier Physics (Isola D'Elba, Italy, May 1997).

- R. R. Karl, Jr., W. K. Grace, J. R. Busse, N. A. Kurnit, A. C. Koskelo, and O. G. Peterson, "Data Analysis of Lidar Measurements of Atmospheric Boundary Layer Aerosols from a Black Hawk Helicopter," Geosciences and Remote Sensing Symposium (Singapore, August 1997).
- R. R. Karl, Jr., N. A. Kurnit, and W. Hungate, "Atmospheric Aerosol Monitoring by 1.54 μm Eyesafe Elastic Backscatter Lidar from a Black Hawk Helicopter," Airborne Remore Sensing Conference (Copenhagen, Denmark, July 1997).
- R. K. Keinigs, R. J. Faehl, and D. Platts, "Modeling of a Soft X-Ray Diode using Particle-in-Cell and Monte-Carlo Simulations," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- R. K. Keinigs, H. Lee, and R. J. Trainor, "Current/Performance Scaling Studies for the Altas Project," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).
- N. S. P. King, T. E. McDonald, and G. J. Yates, "Ultra-Fast CCD Framing Camera using Imageline Record and Shift Concept," 43rd International Instrumentation Symposium (Orlando, Florida, May 1997).
- R. C. Kirkpatrick and G. C. Idzorek, "Analysis of Filtered Silicon Diode Data from MAGO/MTF Experiments," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- R. C. Kirkpatrick and G. C. Idzorek, "Analysis of Filtered Silicon Diode Data from the MAGO-II and MAGO-III Experiments," Innovative Confinement Concepts Workshop (Marina del Rey, California, March 1997).
- K. A. Klare, J. M. Wallace, and D. Drake, "Tetrahedral Hohlraum Visualization and Pointings," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- J. N. Knudson, S. J. Seestrom, J. D. Bowman, B. E. Crawford, P. P. J. Delheij, T. Haseyama, L. Lowie, A. Masaike, Y. Matsuda, G. E. Mitchell, N. R. Roberson, S. I. Penttilä, Y. Popov, H. Postma, E. I. Sharapov, S. L. Stephenson, Y.-F. Yen, V. W. Yuan, and S. H. Yoo, "Study of Parity Nonconservation with Epithermal Neutrons," International Conference on Neutrons in Research and Industry (Crete, Greece, June 1997), in *SPIE Proceedings* 2867, 388 (1997).
- R. A. Kopp, A. A. Hauer, and W. W. Hsing, "Laser Pulse Shaping for Direct-Drive EOS Experiments on Trident Upgrade," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).

- T. Kozlowski, E. Desmond, J. Haggerty, H.-J. Kehayias, M. Purschke, and C. Witzig, "Analysis, Design, and Implementation of PHENIX On-Line Computing Systems Software using Shlaer-Mellor Object-Oriented Analysis and Recursive Design," International Conference on Computing in High Energy Physics (Berlin, Germany, April 1997), *Computer Physics Communications* 110, 164 (1998).
- R. H. Kraus, Jr., R. Bracht, E. R. Flynn, Q. Jia, P. M. Maas, D. Reagor, and M. Stettler, "A Digital Flux-Locked Loop for High Temperature SQUID Magnetometer and Gradiometer Systems with Field Cancellation," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- N. A. Kurnit, R. F. Harrison, R. R. Karl, Jr., J. P. Brucker, J. R. Busse, W. K. Grace, O. G. Peterson, and W. Hungate, "Generation of $1.54 \mu\text{m}$ Radiation with Application to an Eyesafe Laser Lidar," Lasers '97 (New Orleans, Louisiana, December 1997).
- K. Kwiatkowski, "Heating Nuclei with Antiprotons," Workshop on Fixed Target Physics with the 120-GeV FNAL Main Injector, Antiproton Working Group at Fermi National Accelerator Laboratory (Batavia, Illinois, May 1997).
- K. Kwiatkowski, "Multifragmentation: Thermal vs. Dynamic Effects," 6th International Conference on Nucleus-Nucleus Collisions (Gatlinburg, Tennessee, June 1997), *Nuclear Physics A* 630, 168c (1998).
- K. Kwiatkowski, D. Bracken, E. Foxford, K. B. Morley, V. E. Viola, G. Wang, R. G. Korteling, R. Legrain, E. C. Pollacco, and C. Volant, "Ion-induced Multifragmentation," 35th International Winter Meeting on Nuclear Physics (Bormio, Italy, February 1997), *Proceedings of 35th International Winter Meeting on Nuclear Physics*, p. 432.
- K. Kwiatkowski, W.-C. Hsi, G. Wang, A. Botvina, D. S. Bracken, H. Breuer, E. Cornell, W. A. Friedman, F. Gimeno-Nogues, D. S. Ginger, S. Gushue, M. J. Huang, R. G. Korteling, W. G. Lynch, K. B. Morely, E. C. Pollacco, E. Ramakrishnan, L. P. Remsberg, D. Rowland, M. B. Tsang, V. E. Viola, C. Volant, H. Xi, and S. J. Yennello, "Dynamic and Statistical Effects in Light-Ion-Induced Multifragmentation," in *Advances in Nuclear Dynamics 4*, W. Bauer and H. G. Ritter, Eds. (Plenum Press, 1998), p. 173.
- G. A. Kyrala, "Intense Sub-nm X-Ray Generation for Diagnostic Applications," International Workshop on Measurements of the Ultrafast Dynamics (Esterel, June 1997).

- G. A. Kyrala, A. Ya Faenov, T. Pikuz, M. Wilke, J. Abdallah, Jr., and R. P. Johnson, "Intense Sub-nm X-Ray Generation for Diagnostic Applications," Measurements of the Ultrafast Dynamics of Complex Systems (Montreal, Canada, June 1997).
- G. A. Kyrala, R. P. Johnson, and N. K. Moncur, "Effect of Laser Prepulse on the Efficiency of Generations of X-Rays," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- G. A. Kyrala, M. D. Wilke, R. P. Johnson, J. Abdallah, Jr., A. Ya Faenov, and T. Pikuz, "KeV X-Ray Generation with Powerful Sub-Picosecond Lasers," Physics of Quantum Electronics (Snowbird, Utah, January 1997).
- R. M. Leahy, J. C. Mosher, and J. W. Phillips, "A Comparative Study of Minimum Norm Inverse Methods for MEG Imaging," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- H. Lee, R. R. Bartsch, R. L. Bowers, W. Anderson, W. L. Atchison, R. E. Chrien, J. Cochrane, H. Oona, D. Platts, M. Rich, W. R. Shanahan, D. W. Scudder, J. Stokes, L. Veeser, and W. Broste, "Megabar Liner Experiments on Pegasus II," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 366 (1997).
- M. J. Leitch, "New Results from Fermilab E866: \bar{d}/\bar{u} of the Proton and Nuclear Effects in J/Psi Production," Meeting of the Division of Nuclear Physics of the American Physical Society (Whistler, Canada, October 1997).
- I. R. Lindemuth, C. Ekdahl, R. C. Kirkpatrick, R. E. Reinovsky, R. E. Siemon, P. T. Sheehey, and F. J. Wysocki, "MAGO/MTF: Controlled Thermonuclear Fusion with Existing Pulse Power Systems?" 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997).
- I. R. Lindemuth, C. Ekdahl, R. C. Kirkpatrick, R. E. Reinovsky, R. E. Siemon, P. T. Sheehey, and F. J. Wysocki, "Role of Z-Pinches and Other Related Configurations in MAGO/MTF, a Low-Cost Approach to Controlled Thermonuclear Fusion," Dense Z-Pinches (Vancouver, Canada, May 1997).
- E. L. Lindman, Jr., G. R. Magelssen, J. M. Wallace, N. M. Hoffman, D. C. Wilson, N. D. Delamater, and M. D. Wilke, "Modeling of Symmetry and Drive in Inertial-Confinement Targets at Los Alamos National Laboratory," Current Trends in International Fusion Research (Washington, D.C., March 1997).

- E. A. Lopez, G. A. Bennett, R. R. Bartsch, J. C. Cochrane, J. R. Griego, R. D. Hicks, W. B. Hinckley, K. W. Hosack, R. J. Kasik, A. Marquez, W. M. Parsons, W. A. Reass, M. C. Thompson, and D. Casper, "Rail Gap Switch Modifications and Test Data for the Altas Capacitor Bank," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 881 (1997).
- W. C. Louis, "LSND Neutrino Oscillation Results," Beyond the Desert Workshop on Particle Physics (Castle Ringberg, Germany, June 1997).
- W. C. Louis, "LSND Neutrino Oscillation Results and Implications," Neutrinos in Astro, Particle, and Nuclear Physics, International School of Nuclear Physics (Erice, Italy, September 1997), *Progress in Particle and Nuclear Physics* 40, 151 (1998).
- B. Luetkenhoener, R. Greenblatt, M. Hamalainen, J. Mosher, M. Scherg, C. Tesche, and P. Valdes-Sosa, "Comparison Between Different Approaches to the Biomagnetic Inverse Problem—Workshop Report," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- G. R. Magelssen, R. E. Chrien, D. C. Wilson, and B. H. Wilde, "Integrated Capsule Experiments on Nova," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).
- R. J. Maqueda, G. A. Wurden, J. Terry, and J. A. Stillerman, "IR Imaging of Divertor Heat Loads in Alcator Co-Md1," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997).
- R. J. Maqueda, G. A. Wurden, J. Terry, and J. A. Stillerman, "IR Imaging of Divertor Heat Loads in Alcator Co-Md1," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- B. L. Marrone, J. H. Jett, R. A. Keller, J. C. Martin, R. C. Habbersett, S. Burde, W. P. Ambrose, Z. Huang, Y. Kim, C. R. Kuske, A. Castro, and R. T. Okinaka, "Microbial DNA Fingerprinting by DNA Fragment Sizing Flow Cytometry," Chemical and Biological Defense Research (Aberdeen Proving Ground, Maryland, November 1997).
- F. J. Marshall and J. A. Oertel, "Framed Monochromatic X-Ray Microscope for ICF (Invited)," 11th Topical Conference on High-Temperature Plasma Diagnostics (Monterey, California, May 1996), *Review of Scientific Instruments* 68, 735 (1997).

- E. R. Martin, B. G. Anderson, L. L. Sprouse, and R. L. York, "New Neutron Controller for Monitoring Pedestrians and Vehicles for Plutonium at the Sensitive Access Control Points of a Nuclear Facility," IEEE Nuclear Symposium (Albuquerque, New Mexico, November 1997).
- R. J. Mason, R. A. Kopp, S. R. Goldman, D. C. Wilson, and R. G. Watt, "Structural Effects in ICF Foam-Buffered Targets," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).
- R. J. Mason, R. A. Kopp, H. X. Vu, D. C. Wilson, S. R. Goldman, and R. G. Watt, "Foam Buffered Laser-Matter Interactions," Laser Interactions and Related Plasma Phenomena (Monterey, California, April 1997).
- R. J. Mason, R. A. Kopp, R. G. Watt, and D. C. Wilson, "Structural Effects in Foam-Buffered Laser-Matter Interactions," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- W. Matuska, R. J. Bartlett, G. Idzorek, E. L. Lindman, Jr., D. L. Peterson, C. E. Ragan, and M. Rich, "Interpreting Saturn Hohoraum Behavior," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).
- D. Mayo, J. E. Koster, R. O. Nelson, S. A. Wender, H. M. Blann, V. Brown, P. Anthony, L. F. Hansen, B. Pohl, T. C. Sangster, D. Kroscheck, F. P. Brady, J. L. Romero, D. M. Skopik, E. Hallin, H. Hifenecker, and J. A. Pinston, "Neutron Proton Bremsstrahlung Inclusive Photon Measurement at LANSCE/WNR: Results for Tn from 100 to 280 MeV," Meeting of the Division of Nuclear Physics of the American Physical Society (Whistler, Canada, October 1997).
- J. B. McClelland, "Proton Radiography: A New Way to Dynamically Image Thick Systems," IUCF Meeting (Bloomington, March 1997).
- D. D. Meyerhoffer, T. R. Boehly, D. H. Kalantar, J. P. Knauer, D. K. Bradley, R. L. Keck, R. J. Taylor, V. A. Smalyuk, W. Seka, C. P. Verdon, R. G. Watt, and O. Willi, "Performance of Planar Foam-Buffered Targets on the Omega Laser System," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).
- G. E. Mitchell, J. D. Bowman, B. E. Crawford, P. P.J. Delheij, T. Haseyama, J. N. Knudson, L. Y. Lowie, A. Masaike, Y. Masuda, Y. Matsuda, S. Penttilä, H. Postma, N. R. Roberson, S. J. Seestrom, E. I. Sharapov, S. L. Stephenson, Y.-F. Yen and V. W. Yuan, "Parity Violation with Epithermal Neutrons," International Conference on Nuclear Dynamics at Long and Short Distances (Angra dos Reis, Brazil, 1997), in *Nuclear Dynamics at Long and Short Distances*, H. Dias, *et al.*, Eds. (World Scientific, Singapore, 1997), p. 44.

- G. E. Mitchell, J. D. Bowman, B. E. Crawford, P. P.J. Delheij, T. Haseyama, J. N. Knudson, L. Y. Lowie, A. Masaike, Y. Masuda, Y. Matsuda, S. Penttilä, H. Postma, N. R. Roberson, S. J. Seestrom, E. I. Sharapov, S. L. Stephenson, Y.-F. Yen, and V. W. Yuan, "Parity Violation with Epithermal Neutrons," 9th International Conference on Capture Gamma-Ray Spectroscopy (Budapest, Hungary, 1997), in *Proceedings of the 9th International Conference on Capture Gamma-ray Spectroscopy*, p. 616.
- D. S. Montgomery, B. B. Afeyan, J. A. Cobble, J. C. Fernández, M. D. Wilke, S. H. Glenzer, R. K. Kirkwood, B. J. MacGowan, J. D. Moody, E. L. Lindman, D. H. Munro, B. H. Wilde, H. A. Rose, D. F. DuBois, B. Bezzerides, and H. X. Vu, "Evidence of Plasma Fluctuations and their Effect on the Growth of Stimulated Brillouin and Stimulated Raman Scattering in Laser Plasmas," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997), *Physics of Plasmas* 5, 1973 (1998).
- D. S. Montgomery, J. C. Fernández, M. D. Wilke, B. MacGowan, D. H. Munro, J. A. Cobble, B. H. Wilde, R. Kirkwood, J. D. Moody, and B. B. Afeyan, "Evidence of Plasma Fluctuations and their Effect on Stimulated Raman and Stimulated Brillouin Scattering," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).
- K. R. Moore, J. R. Frigo, and M. W. Tilden, "Novel Microsatellite Control System," (San Francisco, California, December 1997).
- D. V. Morgan, D. A. Platts, J. S. Shlachter, D. L. Martinez, and B. Carpenter, "Analysis of Radial Radiography for the Liner Stability Series at Pegasus: PGII-59, PGII-62, and PGII-63," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1381 (1997).
- K. B. Morley, C. L. Morris, J. D. Zumbro, and J. S. Sarracino, "Proof-of-Principle Demonstration of Proton Radiography on a Dynamic Object," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).
- C. Morris, V. Armijo, L. G. Atencio, A. Bridge, A. Gavron, G. Hart, K. Morley, T. Mottershead, G. J. Yates, and J. Zumbro, "An Integrating Image Detector for High Energy Neutrons," International Conference on Neutrons in Research and Industry (Crete, Greece, June 1996), *SPIE Proceedings* 2867, 351 (1997).
- C. L. Morris, "Proton Radiography," Physics/Theoretical (P/T) Division Colloquium (Los Alamos, New Mexico, September 1997).

- C. L. Morris and J. D. Zumbro, "Overview of Proton Radiography—Concepts and Techniques," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).
- R. W. Moses, R. A. Gerwin, K. T. Schoenberg, and P. T. Sheehan, "Zero Dimensional Simulations of Magnetized Target Fusion on Atlas," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- J. C. Mosher, "Subspace Angles: A Metric for Comparisons in EEG and MEG," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- J. C. Mosher, C. H. Chang, and R. M. Leahy, "Comparison of the Constant and Linear Boundary Element Method for EEG and MEG Forward Modeling," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- J. C. Mosher, M. X. Huang, R. Leahy, and M. E. Spencer, "Modeling Versus Accuracy in EEG and MEG Data," Noninvasive Functional Source Imaging (Graz, September 1997).
- J. C. Mosher and R. Leahy, "Source Localization using Recursively Applied and Projected (RAP) MUSIC," Asilomar Conference on Signals, Systems, and Computers (Pacific Grove, California, November 1997).
- C. T. Mottershead and J. D. Zumbro, "Magnetic Optics for Proton Radiography," Particle Accelerator Conference (Vancouver, Canada, May 1997).
- C. P. Munson, "Industrial Process Driven System Requirements for PSII Applications," ATP Motor Vehicle Manufacturing Technology (Ann Arbor, Michigan, October 1997).
- T. J. Murphy, "Nuclear Diagnostics for Inertial Confinement Fusion Implosions," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- T. J. Murphy and N. Delamater, "Indirect-Drive Experiments utilizing Spherical Hohlraums with Tetrahedral Illumination on OMEGA," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May-June 1997).
- T. J. Murphy and W. W. Hsing, "Experimental Plan Review for LANL SSMP Experiments ID1-FY98," Review of SSMP Experiments (Rochester, New York, September 1997).

T. J. Murphy, J. A. Oertel, T. N. Archuleta, C. W. Barnes, R. J. Bartlett, R. R. Berggren, S. B. Boggs, S. E. Caldwell, R. E. Chrien, J. A. Cobble, B. H. Failor, J. R. Faulkner, J. C. Fernández, A. A. Hauer, G. Idzorek, J. L. Jimerson, K. A. Klare, G. A. Kyrala, R. D. Little, L. Looney, D. Montgomery, R. A. Schmell, T. J. Sedillo, W. K. Thorn, R. G. Watt, and M. D. Wilke, "Recent Diagnostic Development for Inertial Confinement Fusion Research at Los Alamos National Laboratory," 9th Topical Conference on High Temperature Plasma Diagnostics (St. Petersburg, Russia, June 1997), *Fizika Plasmy* 24, 144 (1998).

T. J. Murphy, J. A. Oertel, P. L. Gobby, G. R. Magelssen, C. Decker, R. Turner, F. J. Marshall, K. Kearney, R. Kremens, J. M. Wallace, C. W. Barnes, A. A. Hauer, O. L. Landen, L. Suter, R. Wallace, D. Bradley, R. Keck, W. Seka, K. A. Klare, N. D. Delamater, E. L. Lindman, Jr., P. Amendt, B. Hammel, R. S. Craxton, D. Harding, J. Knauer, and M. Cable, "Experiments utilizing Spherical Hohlraums with Tetrahedral Illumination on Omega," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

T. J. Murphy, J. M. Wallace, N. D. Delamater, C. W. Barnes, P. Gobby, A. A. Hauer, E. L. Lindman, G. Magelssen, J. B. Moore, J. A. Oertel, R. Watt, O. L. Landen, P. Amendt, M. Cable, C. Decker, B. A. Hammel, J. A. Koch, L. J. Suter, R. E. Turner, R. J. Wallace, F. J. Marshall, D. Bradley, R. S. Craxton, R. Keck, J. P. Knauer, R. Kremens, and J. D. Schnittman, "Indirect Drive Experiments Utilizing Multiple Beam Cones in Cylindrical Hohlraums on OMEGA," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997), *Physics of Plasmas* 5, 1960 (1998).

T. J. Murphy, J. M. Wallace, K. A. Klare, J. A. Oertel, C. W. Barnes, N. D. Delamater, A. A. Hauer, G. R. Magelssen, P. L. Gobby, O. L. Landen, S. M. Pollaine, P. Amendt, C. Decker, L. J. Suter, B. A. Hammel, R. E. Turner, R. Wallace, R. S. Craxton, F. J. Marshall, D. Bradley, D. Harding, K. Kearney, R. Keck, J. P. Knauer, R. Kremens, W. Seka, M. Cable, and J. D. Schnittman, "Indirect-Drive Experiments utilizing Spherical Hohlraums with Tetrahedral Illumination on Omega," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May-June 1997).

R. O. Nelson, J. A. Becker, D. E. Archer, L. A. Bernstein, G. D. Johns, W. S. Wilburn, W. Younes, D. M. Drake, R. S. Rundberg, S. A. Wender, K. Hauschild, S. W. Yates, and P. E. Garrett, "GEANIE at WNR/LANSCE—A New Instrument for Neutron Science," Nuclear Data for Science and Technology (Trieste, Italy, May 1997).

R. O. Nelson, G. D. Johns, W. S. Wilburn, D. M. Drake, R. S. Rundberg, D. E. Archer, J. A. Becker, L. A. Bernstein, W. Younes, K. Hauschild, G. E. Mitchell, N. R. Roberson, S. W. Yates, and P. E. Garrett,

"Performance and Status of GEANIE," American Physical Society/AAPT Meeting (Washington, D.C., April 1997).

F. Neri, H. A. Thiessen, and P. L. Walstrom, "Synchrotrons and Beamlines for Proton Radiography," Particle Accelerator Conference (Vancouver, Canada, May 1997).

A. W. Obst, D. Fulton, N. S. P. King, D. V. Morgan, D. M. Oró, D. A. Platts, D. S. Sorenson, and M. Stelts, "Performance of the Multi-Pulse X-Ray Imaging System for the Pulsed Power Hydrodynamic Experiments at LANL," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 448 (1997).

H. Oona, G. C. Idzorek, and J. H. Goforth, "Radiation Diagnostics and X-Ray Output from 1213 Mega-Ampere Implosions," IEEE International Conference on Plasma Science (San Diego, California, May 1997).

S. Paling, A. M. Hillas, D. Berley, S. Biller, M. L. Chen, P. Chumney, D. G. Coyne, D. Dorfan, R. A. Ellsworth, J. A. Goodman, T. J. Haines, C. M. Hoffman, L. Kelley, R. Schnee, A. Shoup, C. Sinnis, D. Williams, T. Yang, and G. B. Yodh, "Results from the CACTI Experiment: Air-Cerenkov and Particle Measurements of PeV Air Showers at Los Alamos," Cosmic Ray Conference (Durban, July 1997).

W. M. Parsons, C. C. Baldwin, E. O. Ballard, R. R. Bartsch, J. F. Benage, G. A. Bennett, D. W. Bowman, J. C. Cochrane, J. Creager, H. A. Davis, C. A. Ekdahl, R. F. Gribble, J. R. Griego, W. B. Hinckley, K. W. Hosack, R. J. Kasik, R. K. Keinigs, H. J. Kimerly, E. A. Lopez, A. Marquez, M. D. Monroe, S. A. Ney, D. D. Pierce, D. A. Platts, W. A. Reass, H. R. Salazar, G. M. Sandoval, D. W. Scudder, J. S. Shlachter, M. C. Thompson, R. J. Trainor, G. A. Valdez, R. G. Watt, G. A. Wurden, F. J. Wysocki, and S. M. Younger, "An Overview of the Atlas Pulsed-Power Systems," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 673 (1997).

R. R. Peterson, E. L. Lindman, Jr., N. D. Delamater, and G. R. Magelssen, "Post-shot LASNEX Simulations of Nova Smooth Beam Symmetry Experiments with Thin-Wall Hohlraums," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

T. L. Peterson, G. D. Allred, B. G. Anderson, D. E. Bartram, and J. A. Garcia, "Data Acquisition Techniques for Explosive High Current Generators," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1280 (1997).

- J. A. Phillips and D. A. Baker, "Future Reversed-Field Pinch Experiments," 2nd International Symposium on Evaluation of Current Trends in Fusion Research (Washington, D.C., March 1997), *Proceedings of the Second International Symposium on Evaluation of Current Trends in Fusion Research* (Plenum Press, 1997).
- J. A. Phillips, D. A. Baker, and R. F. Gribble, "Effect of Time Modulation of the Applied Fields on an RFP," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- J. W. Phillips, R. M. Leahy, and J. C. Mosher, "MEG-Based Imaging of Focal Neuronal Current Sources," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- V. V. Platonov, O. Tatsenko, A. I. Bykov, M. I. Dolotenko, J. C. Solem, C. M. Fowler, J. D. Goettee, D. G. Rickel, L. R. Veeser, M. G. Sheppard, W. Lewis, C. H. Gallegos, and B. R. Marshall, "Faraday Effect in $Cd_{0.57}Mn_{0.43}Te$ in High Magnetic Field," International Conference on Magnetism (Cairns, Australia, July 1997).
- M. A. Plum, D. H. Fitzgerald, R. J. Macek, O. R. Sander, H. A. Thiessen, T.-S. Wang, and C. A. Wilkinson, "Experimental Evidence for the Los Alamos Proton Storage Ring Beam Instability," Particle Accelerator Conference (Vancouver, Canada, May 1997).
- E. C. Pollacco, J. Brzychczyk, C. Volant, R. Legrain, L. Naplas, D. S. Bracken, H. Breuer, R. G. Korteling, K. Kwiatkowski, K. B. Morley, E. Renshaw-Foxford, V. E. Viola, N. R. Yoder, J. G. del Campo, and J. Cugnon, "Boiling a Nucleus," 35th International Winter Meeting on Nuclear Physics (Bormio, Italy, February 1997), in *Proceedings of 35th International Winter Meeting on Nuclear Physics*, p. 527.
- Pollak, G. D., D. B. Harris, R. E. Chrien, and B. F. Failor, "Mix, Temperature, and Density Capsule Conditions in a 1-ns Square Pulse Convergence Study," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997), *Bulletin of the American Physical Society* 42, 1841 (1997).
- C. E. Ragan, B. W. Asay, B. I. Bennett, Jr., J. D. Bowman, D. J. Funk, G. L. Morgan, R. L. Rabie, and V. W. Yuan, "Shock Temperature Measurements using Neutron Resonance Spectroscopy (NRS)," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

- D. M. Ranken and J. S. George, "MRIVIEW: A Software tool for Integrating Brain Structural and Functional Information," 3rd International Conference on Functional Mapping of the Human Brain (Copenhagen, Denmark, May 1997).
- W. A. Reass, G. A. Bennett, D. Bowman, E. Lopez, M. Monroe, and W. Parsons, "Performance Characteristics of the Altas 60 kV, 60 kJ Plastic Capacitors," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1632 (1997).
- W. A. Reass, H. A. Davis, D. Coates, and H. Schleinitz, "Continued Efforts for a 200 kV, 20 kA Radar-Like Pulser for Intense Ion Beam Processing," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997).
- W. A. Reass, D. A. Miera, and G. A. Wurden, "Initial Design of the 60 Megawatt Rotating Magnetic Field (RMF) Oscillator System for the University of Washington 'TCS' Field Reversed Configuration Experiment," 17th IEEE/NPSS Symposium on Fusion Engineering (San Diego, California, October 1997).
- W. A. Reass, G. A. Wurden, D. L. Nadel, M. E. Mauel, and G. A. Navratil, "Operational Performance of the Two Channel 10 Megawatt Feedback Amplifier System for MHD Control on the Columbia University HBT-DP Tokamak," 17th IEEE/NPSS Symposium on Fusion Engineering (San Diego, California, October 1997).
- R. E. Reinovsky, B. G. Anderson, D. A. Clark, C. A. Ekdahl, R. J. Faehl, J. H. Goforth, I. R. Lindemuth, T. L. Petersen, P. T. Sheehey, L. J. Tabaka, V. K. Chernyshev, V. N. Mokhov, V. N. Buzin, O. M. Byrenkov, A. M. Bujko, V. V. Vakhruchev, S. F. Garanin, B. E. Grinevich, Y. N. Gorbachev, E. V. Gubkov, V. A. Demidov, V. I. Dudoladov, V. V. Zmushko, A. I. Kuzyaev, A. I. Kucherov, B. M. Lovyagin, Y. I. Matsev, P. N. Nizovtsev, A. A. Petrukhin, A. I. Pishurov, S. S. Sokolov, V. P. Solovjov, A. I. Startsev, and V. B. Yakubov, "HEL-1: A DEMG Based Demonstration of Solid Liner Implosions at 100 MA," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 378 (1997).
- D. J. Rej, H. A. Davis, J. C. Olson, G. E. Remnev, A. N. Zakoutaev, V. A. Ryzhkov, V. K. Struts, I. F. Isakov, V. A. Shulov, N. A. Nochevnaya, R. Stinnett, E. L. Neau, K. Yatsui, and W. Jiang, "Materials Processing with Intense Pulsed Ion Beams," 43rd National Symposium of the American Vacuum Society (Philadelphia, Pennsylvania, October 1996), *Journal of Vacuum Science and Technology A* 15, 1089 (1997).

- D. C. Rislove, H. C. Bryant, M. Gulley, C. E. M. Strauss, D. J. Funk, W. A. Miller, X. M. Zhao, A. Stintz, G. A. Kyrala, and W. B. Ingalls, "Isotope-Dependent Effects in an Autodetaching Resonance in H⁻," Physics of Electronic and Atomic Collisions (Vienna, Switzerland, July 1997).
- D. C. Rislove, H. C. Bryant, W. A. Miller, A. Stintz, X. M. Zhao, M. Gulley, D. J. Funk, C. E. M. Strauss, G. A. Kyrala, and W. B. Ingalls, "Resonant Two-Photon Detachment in Negative Hydrogen Ions," American Physical Society/AAPT Meeting (Washington, D.C., April 1997).
- B. R. Rusnak, W. B. Haynes, K.-C. D. Chan, R. C. Gentzlinger, R. B. Kidman, N. S. P. King, R. E. Lujan, M. Maloney, S. Ney, A. H. Shapiro, J. L. Ullmann, A. Hanson, and H. Sefa, "In-Situ Proton Irradiation and Measurement of Superconducting RF Cavities under Cryogenic Conditions," Particle Accelerator Conference (Vancouver, Canada, May 1997).
- G. J. Sadler, J. M. Adams, C. W. Barnes, P. Batistoni, N. Watkins, L. C. Johnson, F. B. Marcus, M. J. Loughlin, A. L. Roquemore, D. Bond, N. Hawkes, O. N. Jarvis, and P. van Belle, "Calibration Issues for Neutron Diagnostics," Diagnostics for Thermonuclear Reactors (Varenna, Italy, September 1997).
- V. D. Sandberg, "LSND Data Acquisition," IEEE/Real Time Conference (Beaune, France, September 1997).
- D. M. Schmidt and J. S. George, "A Method for Calculating Regions Containing Neural Activation at a Given Confidence Level from MEG Data," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- D. M. Schmidt, J. S. George, and C. C. Wood, "Estimating Active Regions of Variable Extent from MEG Data," 3rd International Conference on Functional Mapping of the Human Brain (Copenhagen, Denmark, May 1997).
- K. T. Schoenberg, C. W. Barnes, J. C. Fernández, A. A. Hauer, W. W. Hsing, R. A. Kopp, and S. A. Letzring, "Physics Mission and Objectives of the Trident Upgrade Laser," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- D. W. Scudder, K. W. Hosack, W. M. Parsons, W. A. Reass, M. C. Thompson, F. J. Wysocki, and J. Creager, "Controls and Data Acquisition on Atlas," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1285 (1997).

- S. J. Seestrom, "Initial Testing of an Ultra-Cold Neutron Source at Los Alamos," American Physical Society/AAPT Meeting (Washington, D.C., April 1997).
- S. J. Seestrom, T. J. Bowles, T. O. Brun, R. E. Hill, and C. L. Morris, "Initial Testing of an Ultra-Cold Neutron Source at Los Alamos," 4th International Seminar on Neutron-Nucleus Interactions (Dubna, Russia, May 1997).
- S. J. Seestrom, T. J. Bowles, R. Hill, G. L. Greene, and C. L. Morris, "Development of an Ultra-Cold Neutron Source at MLNSC," International Conference on Neutrons in Research and Industry (Crete, Greece, June 1997), *SPIE Proceedings* 2867, 521 (1997).
- S. J. Seestrom, T. J. Bowles, R. E. Hill, G. L. Greene, and C. L. Morris, "Development of an Ultracold Neutron Source at the Los Alamos Neutron Science Center," Nuclear Data for Science and Technology (Trieste, Italy, May 1997).
- S. J. Seestrom, J. D. Bowman, B. E. Crawford, P. P. J. Delheij, T. Haseyama, J. N. Knudson, L. Y. Lowie, A. Masaike, Y. Matsuda, G. E. Mitchell, N. R. Roberson, S. Penttilä, Yu. P. Popov, H. Postma, E. I. Sharapov, S. Stephenson, Y.-F. Yen, and V. Yuan, "Study of Parity Nonconservation with Epithermal Neutrons," International Conference on Neutrons in Research and Industry (Crete, Greece, June 1997), *SPIE Proceedings* 2867, 388 (1997).
- G. S. Selwyn, "Contamination Control for Plasma Tools and Semiconductor Processes," Contamination, its Measurement, and Control in Vacuum Systems (Newport News, Virginia, March 1997).
- G. S. Selwyn, "New Developments and Opportunities for In-Situ Imaging and Control of Particulate Contamination in Plasma Processing," Dusty Plasmas (Cambridge, England, May 1997).
- G. S. Selwyn, "Real-Time Visualization of the Physics and Chemistry of Particulate Contamination in Plasma and Materials Processing," ASM Conference on Materials Processing (Amsterdam, Netherlands, October 1997).
- G. S. Selwyn, I. Henins, J. Jeong, S. Babayan, and R. Hicks, "High Rate Cleaning of Surfaces using Atmospheric Pressure Generation of Reactive Metastable Species," American Vacuum Society (San Jose, California, October 1997).
- G. S. Selwyn and W. Welch, "In-Situ Detection and Removal of Particulate Contamination by Plasma Processing," Electrochemical Society Meeting (Montreal, Canada, May 1997).

W. R. Shanahan, M. S. Murillo, and J. F. Benage, Jr., "Simulation of a Strongly Coupled Plasma Experiment," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

P. T. Sheehey, R. J. Faehl, J. A. Guzik, R. C. Kirkpatrick, I. R. Lindemuth, R. A. Gerwin, R. W. Moses, R. E. Reinovsky, and F. J. Wysocki, "Magnetized Target Fusion Research at Los Alamos National Laboratory," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

P. T. Sheehey, R. A. Gerwin, R. C. Kirkpatrick, I. R. Lindemuth, R. W. Moses, and F. J. Wysocki, "Computational Modeling of Wall-Supported Dense Z-Pinches," Dense Z-Pinches (Vancouver, Canada, May 1997).

P. T. Sheehey, R. A. Gerwin, R. C. Kirkpatrick, I. R. Lindemuth, and F. J. Wysocki, "Computational Modeling of Wall-Supported Dense Z-Pinches," IEEE International Conference on Plasma Science (San Diego, California, May 1997).

P. T. Sheehey, R. A. Gerwin, R. C. Kirkpatrick, I. R. Lindemuth, and F. J. Wysocki, "Computational Modeling of Wall-Supported Dense Z-Pinches," Innovative Confinement Concepts Workshop (Marina del Rey, California, March 1997).

M. G. Sheppard, W. L. Atchison, W. E. Anderson, R. J. Bartlett, J. H. Brownell, K. R. Calahan, C. A. Ekdahl, G. A. Erickson, C. M. Fortgang, R. D. Fulton, R. A. Gore, C. R. Hall, D. V. Morgan, H. Oona, D. M. Oró, J. P. Roberts, G. Rodriguez, L. E. Rohlev, L. D. Sanders, J. L. Stokes, J. B. Stone, J. K. Studebaker, A. Taylor, R. J. Trainor, D. Winske, B. L. Wright, R. R. Bartsch, J. C. Cochrane, and W. L. Coulter, "Rayleigh-Taylor Mix Experiment on Pegasus," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

M. G. Sheppard, W. L. Atchison, W. E. Anderson, R. J. Bartlett, J. H. Brownell, K. R. Calahan, C. A. Ekdahl, G. A. Erickson, C. M. Fortgang, R. D. Fulton, R. A. Gore, C. R. Hall, D. V. Morgan, H. Oona, D. M. Oró, J. P. Roberts, G. Rodriguez, L. E. Rohlev, L. D. Sanders, J. L. Stokes, J. B. Stone, J. K. Studebaker, A. Taylor, R. J. Trainor, D. Winske, B. L. Wright, R. R. Bartsch, J. C. Cochrane, and W. L. Coulter, "Rayleigh-Taylor Mix Experiment on Pegasus," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June-July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1399 (1997).

J. S. Shlachter, P. J. Adams, W. L. Atchison, R. R. Bartsch, J. F. Benage, J. C. Cochrane, W. L. Coulter, C. A. Ekdahl, R. J. Faehl, R. D. Fulton, J. Guzik, D. Holtkamp, M. E. Jones, R. Keinigs, N. S. P. King, G. A. Kyrala, H. Lee, I. R. Lindemuth, D. V. Morgan, R. W. Moses,

- A. W. Obst, H. Oona, D. Oró, W. M. Parsons, D. Platts, R. E. Reinovsky, G. Rodriguez, D. W. Scudder, M. Sheppard, D. S. Sorenson, J. L. Stokes, A. Taylor, R. J. Trainor, R. G. Watt, and G. A. Wurden, "Pegasus II Experiments and Plans for the Altas Pulsed Power Facility," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 361 (1997).
- V. A. Shulov, N. A. Nochovanya, V. A. Kocheev, L. G. Polyakova, E. V. Fedorova, G. E. Remnev, I. F. Isakov, D. J. Rej, H. A. Davis, M. A. Nastasi, and K. C. Walter, "Crater Formation during Intense Ion Beam Surface Treatment," Surface Modification of Metals by Ion Beams (Gatlinburg, Tennessee, September 1997).
- R. E. Siemon, C. A. Ekdahl, Jr., I. R. Lindemuth, R. E. Reinovsky, and K. T. Schoenberg, "Magnetized Target Fusion: Principles and Status," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- J. Simon-Gillo, "Deuteron and Anti-Deuteron Production in Heavy-Ion Collisions," Physics and Astrophysics of Quark Gluon Plasma (Jaipur, India, March 1997).
- D. P. Smitherman, R. E. Chrien, N. M. Hoffman, and G. R. Magelssen, "Modeling of Feed-Out Instability in Nova Experiments," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997), *Bulletin of the American Physical Society* 42, 1953 (1997).
- D. S. Sorenson, B. Carpenter, N. S. P. King, D. Morgan, A. W. Obst, D. Platts, P. Rodriguez, J. Roberts, M. Stelts, J. Stokes, T. Taylor, L. Veeser, B. C. Frogget, R. M. Malone, T. W. Tunnell, D. T. Westley, W. B. Broste, and R. Flurer, "Ejecta Experiments at the Pegasus Pulsed Power Facility," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1387 (1997).
- M. E. Spencer, R. M. Leahy, and J. C. Mosher, "A Skull-Based Multiple Dipole Phantom for EEG and MEG Studies," Biomag96: Advances in Biomagnetic Research (Santa Fe, New Mexico, February 1996), *Biomag96: Advances in Biomagnetic Research* (Springer-Verlag, New York, 1997).
- J. L. Stokes, J. A. Guzik, and P. J. Adams, "Disrupted Hydrodynamics Experiments on Pegasus," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).
- F. J. Swenson, R. E. Chrien, B. H. Wilde, D. L. Peterson, W. Matuska, G. Idzorek, W. E. Anderson, J. L. Porter, R. Spielman, C. Deeney, G. A. Chandler, and D. L. Fehl, "Early Results From Integrated AGEX on

the Z Machine," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

J. J. Szymanski, W. M. Snow, J. D. Bowman, B. Cain, B. E. Crawford, P. P. J. Delheij, R. D. Hartman, T. Haseyama, C. D. Keith, J. N. Knudson, A. Komives, M. Leuschner, L. Y. Lowie, A. Masaike, Y. Matsuda, G. E. Mitchell, S. I. Penttilä, H. Postma, D. Rich, N. R. Roberson, S. J. Seestrom, E. Sharapov, S. L. Stephenson, Y.-F. Yen, and V. W. Yuan, "Parity Violation in Neutron Transmission in Xenon," 4th International Seminar on Neutron-Nucleus Interactions (Dubna, Russia, 1997), in *Proceedings of the Forth International Seminar on Neutron-Nucleus Interactions* (JINR, Dubna, 1997), p. 113.

H. A. Thiessen, "Overview from Los Alamos: Current Thinking on RF Upgrade Issues," Particle Accelerator Conference (Vancouver, Canada, May 1997).

H. A. Thiessen, F. Neri, K. R. Rust, and D. B. Redd, "Multi-Pulse Extraction from Los Alamos Proton Storage Ring for Radiographic Applications," Particle Accelerator Conference (Vancouver, Canada, May 1997).

M. C. Thompson, K. W. Hosack, and D. W. Scudder, "Optically Based Remote Sensor-Transponder for the Atlas Capacitor Bank Monitoring and Control System," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997).

M. W. Tilden, "Coordinated Covert Detector Ecologies," 4th European Conference on Artificial Life (Brighton, United Kingdom, July 1997), in *Proceedings of the 4th European Conference on Artificial Life*, P. Husbands and I. Harvey, Eds. (MIT Press/Bradford Books, 1997).

M. W. Tilden, J. R. Frigo, and K. R. Moore, "Novel Microsatellite Control System," International Workshop on Applications of Neural Networks to Telecommunications (Melbourne, Australia, June 1997).

R. J. Trainor, J. F. Benage, Jr., J. A. Guzik, and P. J. Adams, "Pegasus/Atlas Experiment Design for Secondary Weapons Physics," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).

R. J. Trainor, W. M. Parsons, E. O. Ballard, R. R. Bartsch, J. F. Benage, G. A. Bennett, R. L. Bowers, D. W. Bowman, J. H. Brownell, J. C. Cochrane, H. A. Davis, C. A. Ekdahl, R. D. Fulton, R. F. Gribble, J. R. Griego, J. Guzik, M. E. Jones, W. B. Hinckley, K. W. Hosack, R. J. Kasik, R. Keinigs, H. Lee, E. A. Lopez, I. R. Lindemuth, M. D. Monroe, R. W. Moses, D. Oró, S. A. Ney, D. D. Pierce, D. Platts, W. A. Reass, R. E. Reinovsky, G. Rodriguez, H. R. Salazar, G. M. Sandoval, D. W. Scudder, M. Sheppard, J. S. Shlachter, A. Taylor, M. C. Thompson, G. A. Valdez, R. G. Watt, and G. A. Wurden,

“Overview of the Atlas Project,” 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 37 (1997).

R. J. Trainor, J. S. Shlachter, J. F. Benage, Jr., D. W. Scudder, and W. M. Parsons, “Applications of the Atlas Pulsed Power Facility,” 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997).

D. L. Tubbs, N. M. Hoffman, J. B. Beck, and C. W. Barnes, “Direct-Drive Targets for Cylindrical Implosions Experiments,” 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).

Tubbs, D. L., N. M. Hoffman, J. B. Beck, and C. W. Barnes, “Direct-Drive Targets for Cylindrical Implosion Experiments,” 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

T. W. Tunnell, R. M. Malone, R. H. Frederickson, A. D. DeLanoy, D. E. Johnson, C. A. Ciarcia, and D. S. Sorenson, “Deriving Particle Distributions from In-Line Fraunhofer Holographic Data,” Signal and Data Processing of Small Targets (San Diego, California, July 1997), *SPIE Proceedings* 3163, 558 (1997).

H. W. van Hecke, “Determining Freezeout Temperatures in Relativistic Heavy-Ion Collisions,” American Chemical Society (Las Vegas, Nevada, September 1997).

H. van Hecke, J. P. Sullivan, J. R. Nix, D. D. Strottman, and B. R. Schlei, “Extracting Hydrodynamic Parameter Values from 158 GeV/c Pb+Pb Collision Data,” Ultra-Relativistic Nucleus-Nucleus Collisions (Tsukuba, Japan, December 1997).

L. R. Veeser, C. A. Ekdahl, Jr., H. Oona, P. J. Rodriguez, J. C. Solem, S. M. Younger, W. Lewis, W. D. Turley, A. I. Bykov, V. V. Aseeva, G. V. Boriskov, M. I. Dolotenko, N. I. Egorov, N. P. Kolokol’Chikov, Y. P. Kuropatkin, V. D. Mironenko, V. N. Pavlov, and A. A. Volkov, “Isentropic Compression of Argon using Pulsed Power,” 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 1, 384 (1997).

J. M. Veilleux, M. S. El-Genk, E. P. Chamberlin, C. Munson, and J. Fitzpatrick, “Plasma Decontamination of Uranium Oxide from Stainless Steel Surfaces,” American Nuclear Society 1997 Winter Meeting (Albuquerque, New Mexico, November 1997), *Transactions of the American Nuclear Society* 77, 120 (1997).

V. E. Viola, K. Kwiatkowski, W.-C. Hsi, G. Wang, D. S. Bracken, H. Breuer, Y. Y. Chu, E. Cornell, F. Gimeno-Nogues, D. S. Ginger, S. Gushue, M. J. Huang, R. G. Korteling, W. G. Lynch, K. B. Morely, E. Ramakrishnan, L. P. Remsberg, D. Rowland, M. B. Tsang, V. E. Viola, S. J. Yennello, N. R. Yoder, and H. Xi, "Heating the Nuclear Liquid with GeV Hadrons," 8th International Conference on Nuclear Reaction Mechanisms (Varennna, Italy, June 1997), in *Proceedings of 8th International Conference on Nuclear Reaction Mechanisms*, p. 198.

H. Wagner, R. W. Moses, and K. F. Schoenberg, "Industrial Magnetoplasmadynamic Processing Tool," American Chemical Society Metallurgical Coatings and Thin Films (San Diego, California, April 1997).

P. J. Walsh, S. C. Evans, G. T. Schappert, and G. A. Kyrala, "MCP Characterization at the Cu and Mo $K\alpha$ X-Ray Energies," Ultrahigh- and High-Speed Photography and Image-Based Motion Measurement (San Diego, California, July 1997), *SPIE Proceedings* 3173, 214 (1997).

K. C. Walter, M. A. Nastasi, C. P. Munson, J. T. Scheuer, B. P. Wood, J. R. Conrad, K. Sridharan, S. Malik, and R. A. Breun, "Advances in Plasma Source Ion Implantation Techniques for Surface Modification," Surface Modification of Metals by Ion Beams (Gatlinburg, Tennessee, September 1997).

R. G. Watt, "Experimental Uses of X-Ray Backlighting in High-Energy Density Physics," Altas Diagnostic Workshop (Santa Barbara, California, May 1997).

R. G. Watt, J. R. Duke, N. E. Elliott, P. L. Gobby, R. V. Hollis, R. A. Kopp, R. J. Mason, G. Pollak, D. C. Wilson, T. R. Boehly, D. D. Meyerhofer, J. P. Knauer, C. P. Verdon, O. Willi, R. J. Taylor, and D. H. Kalantar, "Recent Results from the Foam-Buffered Direct Drive Experiment," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).

R. G. Watt, J. R. Duke, N. E. Elliott, P. L. Gobby, R. V. Hollis, O. Willi, R. A. Kopp, R. J. Mason, G. D. Pollak, D. C. Wilson, C. P. Verdon, D. H. Kalantar, T. R. Boehly, J. P. Knauer, and D. D. Meyerhofer, "Rayleigh-Taylor Growth and Imprint Reduction Using Foam Buffer Layers on the Omega Laser," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).

D. H. White, "LSND Neutrino Oscillation Results," Electroweak Interactions and Unified Theories Conference (Les Arcs, March 1997).

D. H. White, Z. Ajduk, and A. K. Wroblewski, "LSND Neutrino Oscillation Results," 28th International Conference on High-Energy Physics (Warsaw, Poland, July 1996).

- W. S. Wilburn, D. M. Drake, G. D. Johns, R. O. Nelson, D. E. Archer, J. A. Becker, L. A. Bernstein, W. Younes, G. E. Mitchell, N. R. Roberson, and J. F. Shriner, "Level Structure Studies with the GEANIE Detector," American Physical Society/AAPT Meeting (Washington, D.C., April 1997).
- W. S. Wilburn, G. E. Mitchell, N. R. Roberson, and J. F. Shriner, Jr., "Techniques for Precision Measurements of Parity Violating Asymmetries," AIP Conference on Application of Accelerators in Research and Industry, *AIP Conference Proceedings* 392, 297 (1997).
- B. H. Wilde, F. J. Swenson, and R. E. Chrien, "Weapons Physics Experiments for the Sandia Z Machine," 11th Biennial Nuclear Explosives Design Physics Conference (Livermore, California, October 1997).
- C. A. Wilkinson, B. Blind, D. H. Fitzgerald, R. J. Macek, F. Neri, M. A. Plum, O. R. Sander, and H. A. Thiessen, "Comparison of Beam Transport Simulations to Measurements at the Los Alamos Proton Storage Ring," Particle Accelerator Conference (Vancouver, Canada, May 1997).
- D. C. Wilson, C. J. Fontes, G. D. Pollak, J. Abdallah, Jr., P. D. Goldstone, and J. A. Cobble, "Non-LTE Effects on X-Ray Emission from Laser Irradiated Gold Shells," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- D. C. Wilson, G. D. Pollak, C. J. Fontes, J. Abdallah, Jr., P. D. Goldstone, J. A. Cobble, S. R. Goldman, and P. Jaanimagi, "Non-LTE Effects on X-Ray Emission from Laser Irradiated Gold Spheres," 27th Annual Anomalous Absorption Conference (Vancouver, Canada, May–June 1997).
- D. Winske, G. S. Selwyn, and M. Rosenberg, "Low Frequency Waves in a Dusty Plasma Crystal," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- B. P. Wood, S. D. Soderquist, A. Gurevich, J. Steele, F. Hampel, K. C. Walter, A. J. Perry, and J. Treglio, "Plasma-Produced Erbia Coatings for Waste Reduction in Plutonium Casting Operations," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- B. P. Wood, S. D. Soderquist, K. M. Vigil, T. N. Taylor, T. Abeyta, A. Gurevitch, J. H. Steele, Jr., F. G. Hampel, K. C. Walter, and J. R. Treglio, "Cathodic-Arc Deposited Erbia for Molten Plutonium Containment in Casting Operations," Plutonium Futures—The Science (Santa Fe, New Mexico, August 1997).

- B. P. Wood, T. N. Taylor, and K. C. Walter, "Plasma Source Ion Implantation to Increase the Adhesion of Subsequently Deposited Coatings," Applied Plasma Science (Los Angeles, California, September 1997).
- B. P. Wood, J. R. Treglio, A. J. Perry, A. Elkind, and H. E. Jetton, "Erbia Coatings to Contain Molten Plutonium," American Chemical Society Metallurgical Coatings and Thin Films (San Diego, California, April 1997).
- B. P. Wood, M. G. Tuszewski, D. Pesenson, and F. Wessel, "Cathodic Arc Plasma Density and Profile Measurements," Council on Undergraduate Research (Washington, D.C., April 1997).
- B. P. Wood, M. Tuszewski, D. Pesensen, and F. J. Wessel, "Cathodic Arc Plasma Density and Profile Measurement," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- J. Workman, T. Tierney, G. A. Kyrala, and J. F. Benage, Jr., "Dense Aluminum Plasma Equation of State Measurements," 39th Annual Meeting of the Division of Plasma Physics of the American Physical Society (Pittsburgh, Pennsylvania, November 1997).
- G. Wurden, "Active Control of 2/1 Magnetic Island in the HBT-EP Tokamak," APS Division of Plasma Physics (Pittsburg, Pennsylvania, November 1997).
- G. A. Wurden, "State of the Art in Bolometry on Large Fusion Devices," International School of Plasma Physics "Piero Caldirola" (Varenna, Italy, September 1997).
- G. A. Wurden, H. A. Davis, A. Taylor, D. Bowman, E. Ballard, S. Ney, D. Scudder, and R. J. Trainor, "Atlas Chamber, Power Flow Channel, and Diagnostic Interface Design," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1291 (1997).
- G. A. Wurden and B. J. Peterson, "Imaging Bolometry Development for Large Fusion Devices," International School of Plasma Physics "Piero Caldirola" (Varenna, Italy, September 1997).
- F. J. Wysocki, R. E. Chrien, G. Idzorek, H. Oona, D. O. Whiteson, R. C. Kirkpatrick, I. R. Lindemuth, and P. T. Sheehey, "Progress with Developing a Target for Magnetized Target Fusion," 11th IEEE International Pulsed Power Conference (Baltimore, Maryland, June–July 1997), *Proceedings of the 11th IEEE International Pulsed Power Conference* 2, 1393 (1997).

- F. J. Wysocki, R. E. Chrien, G. Idzorek, H. Oona, D. O. Whiteson, R. C. Kirkpatrick, I. R. Lindemuth, and P. T. Sheehey, "Progress with Developing a Target for Magnetized Target Fusion," IEEE International Conference on Plasma Science (San Diego, California, May 1997).
- G. J. Yates, N. S. P. King, and T. E. McDonald, "High Speed Intensified Shuttered Multi-Port CCD Camera," 43rd International Instrumentation Symposium (Orlando, Florida, May 1997).
- V. Yuan, "Compound-Nuclear Neutron Resonances for Fundamental and Applied Physics: from Parity Violation to Dynamic Temperature Measurements," Meeting of the Division of Nuclear Physics of the American Physical Society (Whistler, Canada, October 1997).
- V. Yuan, "Neutron Resonances in Compound Nucleus: Parity Conservation to Dynamic Temperature Measurements," International Symposium on Trends in Subatomic Physics (Taipei, Taiwan, August 1997).
- V. W. Yuan, "Neutron Resonances in the Compound Nucleus: Parity Nonconservation to Dynamic Temperature Measurements," Physics Since Parity Symmetry Breaking (Nanjing, Peoples' Republic of China, August 1997), in *Physics Since Parity Symmetry Breaking* (World Scientific, Singapore, 1998), p. 19.
- V. W. Yuan, B. W. Asay, R. M. Boat, J. D. Bowman, D. J. Funk, R. S. Hixson, L. M. Hull, G. W. Laabs, R. K. London, G. L. Morgan, C. E. Ragan, and R. L. Rabie, "Dynamic Temperature and Velocity Measurements using Neutron Resonance Spectroscopy," Nuclear Data for Science and Technology (Trieste, Italy, May 1997), in *Proceedings of the Italian Physical Society* 59, 1723 (1997).

1998 Conferences

- K. L. Albright, R. C. Smith, C. Ho, K. S. Wilson, J. M. Bradley, A. Bird, D. E. Casperson, M. A. Hindman, R. M. Whitaker, J. Theiler, R. W. Scarlett, and W. C. Priedhorsky, "A Photon Counting Imager," Detection and Analysis of Subsurface Objects and Phenomena (Monterey, California, October 1998).
- W. L. Atchison, R. J. Faehl, R. E. Reinovsky, and D. Morgan, "Studies of Solid Liner Stability in Electromagnetic Implosions," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998), abstract in *Abstracts from the 1998 IEEE International Conference on Plasma Science*, 246 (1998).

- D. Baker, "Behavior of Reverse-Field Pinches," 40th Annual Meeting of the Division of Plasma Physics of the American Physical Society (New Orleans, Louisiana, November 1998).
- C. W. Barnes, D. L. Tubbs, J. B. Beck, J. A. Oertel, N. Shambo, S. A. Voss, R. G. Watt, T. R. Boehly, D. K. Bradley, and J. P. Knauer, "Direct-Drive Cylindrical Implosions on the OMEGA Laser," 40th Annual Meeting of the Division of Plasma Physics of the American Physical Society (New Orleans, Louisiana, November 1998).
- C. W. Barnes, D. L. Tubbs, N. M. Hoffman, K. A. Klare, J. A. Oertel, R. G. Watt, T. R. Boehly, D. K. Bradley, and J. P. Knauer, "Experimental Configuration of Direct Drive Cylindrical Implosions on the Omega Laser," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).
- R. Bartlett, "Multi-Laboratory Calibration Facility Proposal," 2nd National Ignition Facility Diagnostics Program Workshop (Jackson Hole, Wyoming, February 1998).
- R. R. Bartsch, D. A. Clark, D. Morgan, W. Anderson, H. Lee, R. Bowers, L. Veeser, W. Atchison, H. Oona, J. Stokes, J. C. Cochrane, and W. Broste, "Composite Liner, Multi-Megabar Shock Driver Development," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998), abstract in *Abstracts from the 1998 IEEE International Conference on Plasma Science*, 243 (1998).
- R. R. Bartsch, H. Lee, D. Holtkamp, B. Wright, J. Stokes, D. Morgan, W. Anderson, and W. Broste, "Imploding Liner Material Strength Measurements at High-Strain and High Strain Rate," 8th International Conference on Megagauss Magnetic Field Generation and Related Topics (Tallahassee, Florida, October 1998).
- R. R. Bartsch and J. Stokes, "Results of Recent Pulsed Power Experiments (on the LANL Pegasus-11 Facility) Relating to Primaries," JOWOG 32-P (Joint United States/United Kingdom Working Group) (Livermore, California, March 1998).
- J. Benage, G. Kyrala, J. Workman, and T. Tierney, "Preliminary Measurements of the EOS of a Dense, Strongly Coupled Aluminum Plasma," International Workshop on the Physics of Nonideal Plasmas (Rostock, Germany, September 1998).
- M. J. Bennett, "Overview of RHIC Experiments and Accelerator," Division of Nuclear Physics Workshop on Heavy-Ion Physics with the Relativistic Heavy Ion Collider (Santa Fe, New Mexico, October 1998).
- M. J. Bennett, "Physics with Relativistic Heavy Ions: Recent Results and Experimental Outlook," Workshop on Perturbative and Non-Perturbative Aspects of the Standard Model (Santa Fe, New Mexico, July 1998).

M. J. Bennett, *et al.* (E878 Collaboration), "Low Pt Particle Spectra and Strangelet Search from Au + Au Collisions: Final Results from BNL-AGS Experiment E878," 14th Winter Workshop on Nuclear Dynamics (Snowbird, Utah, January 1998), in *Advances in Nuclear Dynamics 4*, W. Bauer and H.-G. Ritter, Eds. (Plenum Press, 1998), p. 55.

M. J. Bennett, *et al.* (PHENIX Collaboration), "Measuring Global Observables with PHENIX," Particle Distributions in Hadronic and Nuclear Collisions Workshop (Chicago, Illinois, June 1998), in *Particle Distributions in Hadronic and Nuclear Collisions* (World Scientific, 1999).

M. J. Bennett, *et al.* (PHENIX MVD Group), "The PHENIX Multiplicity and Vertex Detector," Joint American Physical Society/American Association of Physics Teachers Meeting (Columbus, Ohio, April 1998).

J. R. Berendzen, G. S. Waldo, M. S. Park, J. Newman, T. C. Terwilliger, J. L. Perry, E. Marcotte, D. Cascio, T. Thai, M. Balbirnie, E. A. Toth, M. J. Thompson, D. Fischer, S. Griffith, T. O. Yeates, J. Bowie, R. Clubb, and D. Eisenberg, "Structural Proteomics of a High-Temperature Archeaon," Protein Society Annual Meeting (San Diego, California, July 1998).

E. D. Best, D. M. Ranken, J. C. Mosher, J. S. George, M. X. Huang, and C. J. Aine, "MEGAN: A Software Package for MEG and EEG," Functional Mapping of the Human Brain (Montreal, Canada, June 1998), abstract in *Neuroimage 7*, 797 (1998).

W. T. Buttler, R. H. Hughes, P. Kwiat, S. Lamoreaux, Luther, Morgan, Nordholt, Peterson, Simmons, and White, "Practical Quantum Cryptography in Free-Space," International Quantum Electronics Conference (San Francisco, California, May 1998).

S. E. Caldwell, S. R. Goldmann, M. D. Wilke, W. W. Hsing, G. T. Schappert, D. C. Wilson, S. B. Boggs, S. C. Evans, T. J. Sedillo, P. J. Walsh, H. Bush, P. L. Gobby, V. M. Gomez, J. E. Moore, D. J. Thomas, and L. J. Salzer, "Shock Front Evolution Near Joints and Defects," JOWOG 37 (Joint United States/United Kingdom Working Group) (Los Alamos, New Mexico, February 1998).

E. A. Chandler, P. Egan, J. Stokes, R. D. Fulton, N. King, D. Morgan, A. Obst, H. Oona, D. Oró, and D. Platts, "Material Failure and Inertial Instabilities in a Shocked and Imploded Cylindrical Aluminum Sample," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998), abstract in *Abstracts from the 1998 IEEE International Conference on Plasma Science*, 264 (1998).

J. Chiba and J.-C. Peng, "Physics with Primary Beam," International Workshop on JHF Science (Tsukuba, Japan, March 1998), in *KEK Proceedings 98-5*, 185 (1998).

R. E. Chrien, P. L. Gobby, G. R. Magelssen, D. C. Wilson, and B. H. Wilde, "English Concept Experiments on Nova," JOWOG 37 (Joint United States/United Kingdom Working Group) (Los Alamos, New Mexico, February 1998).

R. E. Chrien, W. Matuska, Jr., F. Swenson, D. L. Peterson, G. Idzorek, B. H. Wilde, W. E. Anderson, S. P. Breeze, M. Vargas, and L. E. Ruggles, "Hole Closure Experiments and Simulations on Z," 40th Annual Meeting of the Division of Plasma Physics of the American Physical Society (New Orleans, Louisiana, November 1998).

R. E. Chrien, W. Matuska, Jr., F. Swenson, D. L. Peterson, G. Idzorek, B. H. Wilde, S. P. Breeze, M. Vargas, L. E. Ruggles, and J. Porter, "Measurements and Simulations of Diagnostic Hole Closure on Z," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).

R. E. Chrien, W. Matuska, Jr., F. Swenson, D. L. Peterson, B. H. Wilde, J. Porter, S. P. Breeze, L. E. Ruggles, W. Simpson, and M. Vargas, "Measurement and Simulation of Apertures on Z Hohlraums," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).

R. E. Chrien, B. H. Wilde, F. J. Swenson, D. L. Peterson, W. Matuska, D. C. Wilson, G. R. Magelssen, G. Idzorek, P. L. Gobby, and W. E. Anderson, "Integrated Experiments on Nova and Z," JOWOG 32-S (Joint United States/United Kingdom Working Group) (Aldermaston, United Kingdom, June 1998).

E. D. Church, I. Stancu, W. Strossman, G. J. VanDalen, W. Vernon, D. O. Caldwell, S. Yellin, D. Smith, R. L. Burman, J. B. Donahue, G. T. Garvey, W. C. Louis, G. B. Mills, V. Sandberg, R. Tayloe, D. H. White, R. Imlay, H. J. Kim, A. Malik, W. Metcalf, M. K. Sung, N. Wadia, K. Johnston, A. Fazely, R. M. Gunasingha, L. B. Auerbach, and R. Majkic (LSND Collaboration), "Results from LSND," Institute of Physics Annual Meeting (IOP) (London, England, March 1998).

E. D. Church, I. Stancu, W. Strossman, G. J. VanDalen, W. Vernon, D. O. Caldwell, S. Yellin, D. Smith, R. L. Burman, J. B. Donahue, G. T. Garvey, W. C. Louis, G. B. Mills, V. Sandberg, R. Tayloe, D. H. White, R. Imlay, H. J. Kim, A. Malik, W. Metcalf, M. K. Sung, N. Wadia, K. Johnston, A. Fazely, R. M. Gunasingha, L. B. Auerbach, and R. Majkic (LSND Collaboration), "Results from LSND," SLAC Summer Institute Topical Conference (Stanford, California, August 1998).

D. A. Clark, D. Morgan, and G. Rodriguez, "Pegasus Liner Stability Experiments: Diagnostics and Experimental Results," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998), abstract in *Abstracts from the 1998 IEEE International Conference on Plasma Science*, 163 (1998).

Appendix B

M. D. Cooper and S. K. Lamoreaux, "New Ideas to Search for the Neutron Electric Dipole Moment," International Workshop on CP Violation without Strangeness (Trento, Italy, October 1998).

M. A. Espy, M. D. Cooper, S. K. Lamoreaux, R. H. Kraus Jr., A. Matlachov, and P. Ruminer, "SQUID Detectors in a New Experiment to Measure the Neutron Electron Dipole Moment," Applied Superconductivity Conference (Palm Desert, California, September 1998).

M. A. Espy, E. R. Flynn, R. H. Kraus, Jr., and A. Matlachov, "Design Preliminary Results from a High-Temperature Superconducting SQUID Milliscope used for Nondestructive Evaluation," Applied Superconductivity Conference (Palm Desert, California, September 1998).

M. A. Espy, E. R. Flynn, R. H. Kraus, Jr., and A. Matlachov, "Two Methods for a First Order Hardware Gradiometer using Two Hits SQUIDs," Applied Superconductivity Conference (Palm Desert, California, September 1998).

J. C. Fernández, J. A. Cobble, D. S. Montgomery, and M. D. Wilke, "A Comparative Study of Laser Reflectivity Versus *f*Number in Long-Scale Hohlraum Plasmas," 28th Annual Anomalous Absorption Conference (Bar Harbor, Maine, June 1998).

J. C. Fernández, J. A. Cobble, D. S. Montgomery, and M. D. Wilke, "Experimental Program to Elucidate and Control Stimulated Brillouin and Raman Backscattering in Long-Scale Plasmas," International Atomic Energy Authority Fusion Energy Conference (Yokohama, Japan, October 1998).

J. C. Fernández, J. A. Cobble, D. S. Montgomery, and M. D. Wilke, "Raman and Brillouin Laser Reflectivity Database from Long-Scale Toroidal Hohlraum Plasmas," 40th Annual Meeting of the Division of Plasma Physics of the American Physical Society (New Orleans, Louisiana, November 1998).

E. R. Flynn, R. H. Kraus, Jr., M. A. Espy, and A. Matlachov, "Design and Initial Results of a 155 Channel MEG System," Functional Mapping of the Human Brain (Montreal, Canada, June 1998).

J. R. Frigo, M. W. Tilden, "Biologically Inspired Neural Controller for an Infrared Tracking System," SPIE Symposium on Intelligent Systems and Advanced Manufacturing (Boston, Maryland, November 1998).

J. R. Frigo, M. W. Tilden, and K. R. Moore, "Biologically Inspired Neural Network Controller for an Infrared Tracking System," SPIE Symposium for Nuclear Instrumentation (Boston, Maryland, November 1998).

C. A. Gagliardi, T. C. Awes, M. E. Beddo, M. L. Brooks, C. N. Brown, J. D. Bush, T. A. Carey, T. H. Chang, W. E. Cooper, G. T. Garvey,

D. F. Geesaman, E. A. Hawker, X. C. He, L. D. Isenhower, S. B. Kaufman, D. M. Kaplan, P. N. Kirk, D. D. Koetke, G. Kyle, D. M. Lee, W. M. Lee, M. J. Leitch, N. Makins, P. L. McGaughey, J. M. Moss, B. A. Mueller, P. M. Nord, B. K. Park, V. Papavassiliou, J.-C. Peng, G. Petitt, P. E. Reimer, M. E. Sadler, J. Selden, P. W. Stankus, W. E. Sondheim, T. N. Thompson, R. S. Towell, R. E. Tribble, M. A. Vasiliev, Y. C. Wang, Z. F. Wang, J. C. Webb, J. L. Willis, D. Wise, and G. R. Young, “ \bar{d}/\bar{u} Asymmetry in the Nucleon Sea,” INPC’98 (Paris, France, August 1998), *Nuclear Physics A* (in press).

C. A. Gagliardi, T. C. Awes, M. E. Beddo, M. L. Brooks, C. N. Brown, J. D. Bush, T. A. Carey, T. H. Chang, W. E. Cooper, G. T. Garvey, D. F. Geesaman, E. A. Hawker, X. C. He, L. D. Isenhower, S. B. Kaufman, D. M. Kaplan, P. N. Kirk, D. D. Koetke, G. Kyle, D. M. Lee, W. M. Lee, M. J. Leitch, N. Makins, P. L. McGaughey, J. M. Moss, B. A. Mueller, P. M. Nord, B. K. Park, V. Papavassiliou, J.-C. Peng, G. Petitt, P. E. Reimer, M. E. Sadler, J. Selden, P. W. Stankus, W. E. Sondheim, T. N. Thompson, R. S. Towell, R. E. Tribble, M. A. Vasiliev, Y. C. Wang, Z. F. Wang, J. C. Webb, J. L. Willis, D. Wise, G. R. Young, “ \bar{d}/\bar{u} Asymmetry in the Nucleon Sea,” 14th International Seminar on High Energy Physics Problems (Dubna, Russia, August 1998).

G. Garvey, *et al.* (E866 Collaboration), “Large Asymmetry In the Up-Down Sea of the Nucleon,” International Conference on Baryon-Meson Physics (Cracow, Poland, June 1998).

G. Garvey, *et al.* (E866 Collaboration), “Update of LSND Results on Neutrino Oscillations,” International Conference on Baryon-Meson Physics (Cracow, Poland, June 1998).

G. Garvey, *et al.* (LSND and BooNE Collaborations), “Update on LSND and the Status of BooNE,” European Center for Nuclear Theory Workshop on Physics Beyond the Standard Model (Trento, Italy, April 1998).

J. S. George, D. M. Schmidt, and C. C. Wood, “Probabalistic Strategies for Multi-Modality Integration,” Biomag98: Advances in Biomagnetic Research (Sendia, Japan, August 1998).

M. S. Gulley, J. J. Gomez, M. H. Holzscheiter, R. J. Hughes, D. F. V. James, P. G. Kwiat, S. K. Lamoreaux, C. G. Peterson, V. Sandberg, M. M. Schauer, C. Simmons, D. Tupa, P. Wang, and A. G. White, “Progress Towards Quantum Logic Operations with a Calcium Ion Trap,” Annual Meeting of the Optical Society of America (Baltimore, Maryland, October 1998).

M. S. Gulley, J. J. Gomez, M. H. Holzscheiter, D. F. V. James, P. G. Kwiat, S. K. Lamoreaux, C. G. Peterson, V. Sandberg, M. M. Schauer, C. Simmons, D. Tupa, P. Wang, and A. G. White, and R. J. Hughes, “Progress Towards using a Calcium Ion Trap to Perform Quantum Logic

Operations," 4th International Conference on Quantum Communication, Measurement, and Computing (Evanston, Illinois, August 1998).

M. S. Gulley, R. J. Hughes, J. J. Gomez, M. H. Holzscheiter, D. F. V. James, P. G. Kwiat, S. K. Lamoreaux, C. G. Peterson, V. Sandberg, M. M. Schauer, C. Simmons, D. Tupa, P. Wang, and A. G. White, "Progress Towards Quantum Computation with an Ion Trap," Four Corners Spring Section Meeting of the American Physical Society (Albuquerque, New Mexico, April 1998).

M. S. Gulley, R. J. Hughes, J. J. Gomez, M. H. Holzscheiter, D. F. V. James, P. G. Kwiat, S. K. Lamoreaux, C. G. Peterson, V. Sandberg, M. M. Schauer, C. Simmons, D. Tupa, P. Wang, and A. G. White, "Progress Towards Quantum Computation with Trapped Calcium Ions," Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society (Santa Fe, New Mexico, May 1998).

E. A. Henry, D. E. Archer, W. Younes, J. A. Becker, and R. O. Nelson, "Lu(N,Xn) Cross-Section Measurements," *Abstracts of Papers of the American Chemical Society* 216, 43 (1998).

G. E. Hogan, "PCDAQ, A Windows Based DAQ System," Fall Meeting of the Division of Nuclear Physics of the American Physical Society (Santa Fe, New Mexico, October 1998), abstract in *Bulletin of the American Physical Society* 43, 1557 (1998).

M. H. Holzscheiter, J. J. Gomez, M. S. Gulley, R. J. Hughes, D. F. V. James, P. G. Kwiat, S. K. Lamoreaux, C. G. Peterson, V. Sandberg, M. M. Schauer, C. Simmons, D. Tupa, P. Wang, and A. G. White, "Progress towards Quantum Computation with Trapped Calcium Ions," 16th International Conference on Atomic Physics (Windsor, Canada, August 1998).

M. X. Huang, J. C. Mosher, and R. Leahy, "Sensor-Weighted Multiple Sphere Head Model for MEG," Functional Mapping of the Human Brain (Montreal, Canada, June 1998), abstract in *Neuroimage* 7, 669 (1998).

G. Idzorek and G. A. Chandler, "Spectral Unfold Techniques for Z-Pinch Implosions," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998).

L. C. Johnson, C. W. Barnes, P. Batistoni, C. Fiore, G. Janeschitz, V. Khripunov, A. Krasilnikov, F. B. Marcus, T. Nishitani, G. Sadler, and V. Zaveriaev, "Neutron Cameras for ITER," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).

M. B. Johnson, "Deep Inelastic Scattering and the Pion Wave Function," Conference on the Structure of Mesons, Baryons, and Nuclei (Cracow, Poland, May 1998).

R. H. Kraus, Jr., E. R. Flynn, M. A. Espy, A. Matlachov, W. C. Overton, Jr., M. V. Peters, and P. F. Ruminer, "First Results for a Novel Superconducting Imaging-Surface Sensor Array," Applied Superconductivity Conference (Palm Desert, California, September 1998).

R. H. Kraus, Jr., E. R. Flynn, M. A. Espy, A. Matlachov, W. C. Overton, Jr., C. C. Wood, M. V. Peters, and P. F. Ruminer, "First Results for Superconducting Imaging-Surface Sensor Array for Magnetoencephalography," Biomag98: Advances in Biomagnetic Research (Sendia, Japan, August 1998).

G. A. Kryala, "The Use of High Irradiance Laser for X-Ray Backlighting on Atlas," 40th Annual Meeting of the Division of Plasma Physics of the American Physical Society (New Orleans, Louisiana, November 1998).

G. A. Kryala, R. P. Johnson, and T. R. Hurry, "A New Interferometer to Measure Preheat in Laser Targets," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).

N. A. Kurnit, S. A. Letzring, and R. P. Johnson, "A High-Damage-Threshold Pinhole for Glass Fusion Laser Applications," 3rd Annual International Conference on Solid State Lasers for Application to Inertial Confinement Fusion (Monterey, California, June 1998).

G. A. Kryala, J. B. Workman, S. C. Evans, and T. E. Tierney, "Photocathodes at High Energy: The MTF and Response of Streak Cameras and MCPs at a Few keV X-Ray Energies," High-Speed Photography and Photonics '98 (Moscow, Russia, September 1998).

C. Lee, L. G. Stolarczyk, D. L. Baldridge, J. T. Duncan, J. M. Mack, Jr., R. E. Kelly, R. W. Moses, C. R. Smith, K. S. Wilson, and G. D. Arndt, "Electromagnetic Wave Detection and Imaging Technology (EDIT) Hand-Held Metallic/Nonmetallic Land Mine Detector," 2nd International Conference on the Detection of Abandoned Land Mines (Edinburgh, United Kingdom, October 1998).

M. J. Leitch, "Vector Meson Production and Nuclear Effects in Fermilab E866," RIKEN-BNL Workshop on Quarkonium Production in Ultra-Relativistic Nuclear Collisions (Brookhaven, New York, September 1998).

M. J. Leitch, "Vector Meson Production and Nuclear Effects in FNAL E866," Workshop on Charmonium Production in Relativistic Nuclear Collisions (Seattle, Washington, May 1998).

M. J. Leitch, T. C. Awes, M. L. Brooks, C. N. Brown, J. D. Bush, T. A. Carey, T. H. Chang, W. E. Cooper, C. A. Gagliardi, G. T. Garvey, D. F. Geesaman, E. A. Hawker, X. C. He, L. D. Eisenhower, S. B. Kaufman, D. M. Kaplan, D. D. Koetke, D. M. Lee, W. M. Lee, N. Makins, P. L. McGaughey, J. M. Moss, B. A. Mueller, P. M. Nord, B. K. Park, V. Papavassiliou, J.-C. Peng, G. Petitt, P. E. Reimer, M. E. Sadler,

- P. W. Stankus, W. E. Sondheim, R. S. Towell, R. E. Tribble, M. A. Vasiliev, J. C. Webb, J. L. Willis, D. K. Wise, and G. R. Young, "Vector Meson Production and Nuclear Effects in FNAL E866," 14th International Seminar on High Energy Physics Problems (Dubna, Russia, August 1998).
- W. Louis, *et al.* (LSND Collaboration), "Searches For Neutrino Oscillations III: LSND," WEIN'98 (Santa Fe, New Mexico, June 1998).
- J. Mack, "Update of Significant UXO Detection and Remediation Activities," DOE UXO Advisory Board Multi-University Research Initiative (Denver, Colorado, October 1998).
- J. Mack, C. Briles, R. Kelly, R. Moses, R. C. Smith, S. K. Wilson, D. Baldridge, J. Duncan, P. Encinias, D. Patrick, G. Stolarczyk, L. Stolarczyk, and G. Arndt, "Landmine Detection using Resonant Microstrip Patch Antennas," 2nd International Conference on the Detection of Abandoned Land Mines (Edinburgh, United Kingdom, October 1998).
- J. Mack, S. Caldwell, H. Hsu, and C. Young, "High-Bandwidth Gamma-Ray Inertial Fusion Burn Measurements," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).
- R. J. Maqueda, G. A. Wurden, J. L. Terry, and J. A. Stillman, "C-Mod's New Infrared Imaging System," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).
- A. Matlachov and R. H. Kraus, Jr., "Base Distance Optimization for SQUID Gradiometers," Applied Superconductivity Conference (Palm Desert, California, September 1998).
- A. Matlachov, R. H. Kraus, Jr., M. A. Espy, P. F. Ruminer, and L. G. Atencio, "Sequential Read-Out Architecture for Multichannel SQUID Systems," Applied Superconductivity Conference (Palm Desert, California, September 1998).
- B. T. McCuistian, "High Current Density Electrical Connections in the Atlas Pulsed Power Facility in Los Alamos," Texas Technical University Physics Department Colloquium (Texas, November 1998).
- R. E. Mischke, "Hyperon Particle Physics at JHF," International Workshop on JHF Science (Tsukuba, Japan, March 1998), in *KEK Proceedings 98-5*, 185 (1998).
- R. E. Mischke, "MEGA: A Search for μ to $e\gamma$," International Workshop on JHF Science (Tsukuba, Japan, March 1998), in *KEK Proceedings 98-5*, 185 (1998).

- D. S. Montgomery, R. P. Johnson, J. A. Cobble, J. C. Fernández, E. L. Lindman, and K. G. Estabrook, "Characterization of Plasma and Laser Conditions for Single Hot Spot Interaction Experiments," 25th European Conference on Laser Interaction with Matter (Formia, Italy, May 1998).
- D. S. Montgomery, H. A. Rose, J. A. Cobble, and R. P. Johnson, "Laser-Plasma Interaction Experiments in a Single Hot Spot," 25th European Conference on Laser Interaction with Matter (Formia, Italy, May 1998).
- D. S. Montgomery, H. A. Rose, R. P. Johnson, J. A. Cobble, J. C. Fernández, and E. L. Lindman, "Laser-Plasma Interaction Experiments in a Single Hot Spot," 28th Annual Anomalous Absorption Conference (Bar Harbor, Maine, June 1998).
- K. R. Moore, J. R. Frigo, and M. W. Tilden, "Hugin Backup Attitude and Control System," American Geophysical Union (San Francisco, California, December 1998).
- K. R. Moore, J. R. Frigo, and M. W. Tilden, "Nanosatellite Robots," DARPA Mesoscale Machines Review (Annapolis, Maryland, October 1998).
- J. C. Mosher and R. Leahy, "Recursively Applied and Projected (RAP) Music for Locating Distributed Nondipolar EEG and MEG Sources," Functional Mapping of the Human Brain (Montreal, Canada, June 1998), abstract in *Neuroimage* 7, 680 (1998).
- J. C. Mosher, M. E. Spenser, M. X. Huang, R. Leahy, and J. Lewine, "Study of Dipole Localization's Accuracy for MEG and EEG using a Human Skull Phantom," Functional Mapping of the Human Brain (Montreal, Canada, June 1998).
- C. Munson, "Plasma-Based Surface Enhancement Research and Development at LANL," 12th International Conference on High Power Particle Beams (BEAMS '98) (Haifa, Israel, June 1998).
- T. J. Murphy, R. A. Lerche, and R. G. Hay, "Drive Symmetry Measurements of Indirectly Driven Implosions on Omega," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).
- J. L. Nagle and M. J. Bennett, "Phenomenology of J/Psi and Drell/Yan Production in Heavy Ion Collisions," Annual Meeting of the Division of Nuclear Physics (Santa Fe, New Mexico, October 1998).
- J. Oertel, "A Multipurpose Tim-Based Optical Telescope for OMEGA and Trident Upgrades," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).

- D. M. Oró, R. D. Fulton, and D. Platts, "Flash X-Ray Radiography on Pegasus," JOWOG 37 (Joint United States/United Kingdom Working Group) (Los Alamos, New Mexico, February 1998).
- D. Oró, R. D. Fulton, J. Stokes, J. Guzik, P. J. Adams, D. Morgan, D. Platts, and A. W. Obst, "Studies of Shock Induced Flows in Strengthless Materials on Pegasus," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998), abstract in *Abstracts from the 1998 IEEE International Conference on Plasma Science*, 265 (1998).
- D. M. Oró, R. J. McKee, M. G. Sheppard, W. L. Atchison, and D. V. Morgan, "Analysis of Radiographs from the Rayleigh-Taylor Mix Experiment on Pegasus using the Bayes Inference Engine," Nuclear Explosives Code Development Conference (NECDC) (Las Vegas, Nevada, October 1998).
- C. R. Peña, K. L. Albright, and G. J. Yates, "High-Speed Cooled CCD Experiments," Detection and Analysis of Subsurface Objects and Phenomena (Monterey, California, October 1998).
- J.-C. Peng, T. C. Awes, M. E. Beddo, M. L. Brooks, C. N. Brown, J. D. Bush, T. A. Carey, T. H. Chang, W. E. Cooper, C. A. Gagliardi, G. T. Garvey, D. F. Geesaman, E. A. Hawker, X. C. He, L. D. Isenhower, S. B. Kaufman, D. M. Kaplan, P. N. Kirk, D. D. Koetke, G. Kyle, D. M. Lee, W. M. Lee, M. J. Leitch, N. Makins, P. L. McGaughey, J. M. Moss, B. A. Mueller, P. M. Nord, B. K. Park, V. Papavassiliou, G. Petitt, P. E. Reimer, M. E. Sadler, P. W. Stankus, W. E. Sondheim, T. N. Thompson, R. S. Towell, R. E. Tribble, M. A. Vasiliev, Y. C. Wang, Z. F. Wang, J. C. Webb, J. L. Willis, D. Wise, and G. R. Young (FNAL E866/NuSea Collaboration), "Measurements of the Light Quark Flavor Asymmetry in the Nucleon Sea," International Conference on High Energy Physics (1998, Vancouver, Canada, July 1998).
- S. I. Penttilä, J. J. Jarmer, T. W. Langston, C.-M. Riedel, D. R. Yeamans, M. E. Beddo, J. R. Comfort, K. K. Craig, C. V. Gaulard, M. A. Espy, T. Kasprzyk, H. Spinka, K. R. Knight, D. Rigsby, M. E. Sadler, E. Six, I. Supek, and G. J. Wagner, "Large NMR Signals and Polarization Asymmetries," NMR in Polarized Targets (Charlottesville, Virginia, April 1998).
- P. E. Reimer, "Light Antiquark Flavor Asymmetry in the Nucleon: FNAL E866," Invited Seminar at Los Alamos National Laboratory (Los Alamos, New Mexico, March 1998).
- P. E. Reimer, "Measurement of the \bar{d}/\bar{u} Asymmetry in the Nucleon," Fall Meeting of the Division of Nuclear Physics of the American Physical Society (Santa Fe, New Mexico, October 1998), in *Bulletin of the American Physical Society* 43, 1525 (1998).

P. E. Reimer, "A Measurement of the \bar{d}/\bar{u} Asymmetry in the Nucleon Sea," Invited Seminar at the University of Virginia (Charlottesville, Virginia, April 1998).

P. E. Reimer, "A Measurement of the Light Antiquark Asymmetry in the Nucleon Sea," Invited Seminar at Argonne National Laboratory (Argonne, Illinois, December 1998).

P. E. Reimer, "A Measurement of the Light Antiquark Asymmetry in the Nucleon Sea," Invited Seminar at the University of Illinois (Urbana, Illinois, December 1998).

P. E. Reimer, "Measurement of the Light Antiquark Flavor Asymmetry in the Nucleon Sea: FNAL E866," Pheno-CETQ Symposium '98: From Non-Perturbative QCD to New Physics (Madison, Wisconsin, March 1998).

P. E. Reimer, "Measurement of the Nuclear Dependence of the Phi and Low Mass Muon Pair Continuum," Fall Meeting of the Division of Nuclear Physics of the American Physical Society (Santa Fe, New Mexico, October 1998), in *Bulletin of the American Physical Society* 43, 1567 (1998).

P. E. Reimer, "QCD: Bound States," Fermilab Users Meeting (Batavia, Illinois, July 1998).

R. E. Reinovsky, W. E. Anderson, W. L. Atchison, C. A. Ekdahl, R. J. Faehl, D. A. Clark, I. R. Lindemuth, D. Morgan, M. Murillo, A. M. Buyko, O. M. Burenkov, V. K. Chernyshev, S. F. Garanin, Y. N. Gorbachev, B. E. Grenivech, V. V. Zmushko, G. G. Ivanova, A. I. Kuziev, V. N. Mokhov, P. N. Nizovtsev, A. A. Petrukhin, A. I. Pisichurov, V. P. Solovyev, N. V. Sokolova, V. N. Sofronov, A. I. Startsev, and V. B. Yakubov, "Experimental Observation of Rayleigh-Taylor Modes in Solids with Strength," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998), abstract in *Abstracts from the 1998 IEEE International Conference on Plasma Science*, 245 (1998).

B. R. Schlei, "Bose-Einstein Correlations and the Equation of State of Nuclear Matter in Relativistic Heavy-Ion Collisions," Correlations and Fluctuations Workshop (M'atrah'aza, Hungary, June 1998).

B. R. Schlei, "How Much Can We Learn about the Equation of State from HBT Analysis?" INT Spring Program: Probes on Dense Matter in Ultrarelativistic Heavy Ion Collisions (Seattle, Washington, March 1998).

B. R. Schlei, "Measuring the Space-Time Extent of Nuclear Collisions using Two-Particle Correlations," Fall Meeting of the Division of Nuclear Physics of the American Physical Society (Santa Fe, New Mexico, October 1998).

- B. R. Schlei, "Relativistic Hydrodynamics," PHENIX Collaboration Meeting (Ames, Iowa, June 1998).
- B. R. Schlei and D. Strottman, "Sensitivity of Hydrodynamic Results to the Equation of State at SPS Energies," Fall Meeting of the Division of Nuclear Physics of the American Physical Society (Santa Fe, New Mexico, October 1998).
- D. W. Scudder, "Experimental Techniques Using the HDZP-11 Generator," ABC's of Z's Workshop at the University of Nevada (Reno, Nevada, May 1998).
- G. Selwyn, "Dry Decontamination of Chemical and Biological Warfare Agents using an Atmospheric Pressure Plasma Jet," Air Component Command (Korea, 1998).
- G. Selwyn, "New Methods for Contamination Control and Dry Cleaning of Silicon Wafers," 4th International Symposium on Ultra-Clean Processing of Silicon Surfaces (Ostend, Belgium, September 1998).
- G. Selwyn, "Real Time, *in-situ* Imaging Detection and Control of Process-Generated Particulate Contamination," Rocky Mountain Regional Meeting of the American Vacuum Society (Denver, Colorado, August 1998).
- J. S. Shlachter, "Dense Z-Pinch Research at Los Alamos, Theory and Experiment," ABC's of Z's Workshop at the University of Nevada (Reno, Nevada, May 1998).
- J. S. Shlachter, P. J. Adams, W. L. Atchison, R. R. Bartsch, J. F. Benage, J. C. Cochrane, W. L. Coulter, C. A. Ekdahl, R. J. Faehl, R. D. Fulton, J. Guzik, D. Holtkamp, M. E. Jones, R. Keinigs, N. S. P. King, H. Lee, I. R. Lindemuth, D. V. Morgan, A. W. Obst, H. Oona, D. Oró, D. Platts, R. E. Reinovsky, G. Rodriguez, G. M. Sandoval, D. W. Scudder, M. Sheppard, D. S. Sorenson, J. L. Stokes, and A. Taylor, "Overview of the Pegasus II Experimental Program," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998), abstract in *Abstracts from the 1998 IEEE International Conference on Plasma Science*, 243 (1998).
- J. L. Stokes, "Material Failure and Inertial Instabilities in a Shocked and Imploded Cylindrical Aluminum Sample," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998).
- J. L. Stokes, "Use of the Pegasus Z-Pinch to Study Inertial Instabilities and Material Failure in Aluminum," JOWOG 32-P (Joint United States/United Kingdom Working Group) (Livermore, California, March 1998).

J. P. Sullivan, "Two-Particle Correlations from CERN Experiment NA44," in *Abstracts of Papers of the American Chemical Society* 215, 69-NUCL (1998).

J. Sullivan, "Two Particle Correlations from NA44," CRIS'98 Conference (Catania, Italy, June 1998).

J. Sullivan, "Two Particle Correlation Results from NA44," INT Workshop on Particle Spectra and Correlation (HBT) (Seattle, Washington, March 1998).

J. Sullivan, "Simulations and Performance of the MVD in PHENIX," poster presentation at the IEEE Nuclear Science Symposium and Medical Imaging Conference (Toronto, Canada, November 1998).

T. C. Terwilliger and J. R. Berendzen, "Automated Structure Determination and Structural Genomics," Structural Genomics Conference (Avelon, October 1998).

T. C. Terwilliger and J. R. Berendzen, "Exploring and Exploiting Protein Structure Space," Structural Genomics (Argonne, New York, January 1998).

T. C. Terwilliger and J. R. Berendzen, "Exploring Structure Space: A Protein Structure Initiative," Structural and Functional Genomics (Trieste, Italy, May 1998).

T. C. Terwilliger and J. R. Berendzen, "Protein Crystallography: From X-Ray Diffraction Spots to a Three-Dimensional Image," Optical Society of America (Kona, Hawaii, June 1998).

Y. C. F. Thio, "X-Ray Diagnostics for an MTF Initial Target Plasma," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998).

R. S. Towell, T. C. Awes, M. E. Beddo, C. N. Brown, J. D. Bush, T. A. Carey, T. H. Chang, W. E. Cooper, C. A. Gagliardi, G. T. Garvey, D. F. Geesaman, E. A. Hawker, X. C. He, L. D. Eisenhower, S. B. Kaufman, D. M. Kaplan, P. N. Kirk, D. D. Koetke, G. Kyle, D. M. Lee, W. M. Lee, M. J. Leitch, N. Makins, P. L. McGaughey, J. M. Moss, B. A. Mueller, P. M. Nord, B. K. Park, V. Papavassiliou, J.-C. Peng, G. Petitt, P. E. Reimer, M. E. Sadler, P. W. Stankus, W. E. Sondheim, T. N. Thompson, R. S. Towell, R. E. Tribble, M. A. Vasiliev, Y. C. Wang, Z.F. Wang, J. C. Webb, J. L. Willis, D. K. Wise, and G. R. Young, "New Results from Fermilab E866: Flavor Asymmetry in the Nucleon Sea and Nuclear Effects in J/Psi Production," 33rd Moriond Conference (Moriond, France, March 1998), in *QCD and High Energy Hadronic Interactions*, J. T. T. Van, Ed., (Editions Frontiere, 1998).

- H. van Hecke, "Extracting Global Parameters from Ultrarelativistic Heavy-Ion Collisions," Nuclear Shapes and Motions Symposium (Santa Fe, New Mexico, October 1998).
- W. S. Varnum, C. W. Barnes, R. E. Chrien, N. D. Delamater, J. R. Duke, N. E. Elliott, P. L. Gobby, V. M. Gomez, J. E. Moore, G. D. Pollak, R. G. Watt, J. D. Colvin, R. A. Lerche, and T. W. Phillips, "Double-Shell Capsules as a Promising Alternate Design for ICF," 40th Annual Meeting of the Division of Plasma Physics of the American Physical Society (New Orleans, Louisiana, November 1998).
- M. A. Vasiliev, T. C. Awes, M. E. Beddo, C. N. Brown, J. D. Bush, T. A. Carey, T. H. Chang, W. E. Cooper, C. A. Gagliardi, G. T. Garvey, D. F. Geesaman, E. A. Hawker, X. C. He, L. D. Eisenhower, S. B. Kaufman, D. M. Kaplan, P. N. Kirk, D. D. Koetke, G. Kyle, D. M. Lee, W. M. Lee, M. J. Leitch, N. Makins, P. L. McGaughey, J. M. Moss, B. A. Mueller, P. M. Nord, B. K. Park, V. Papavassiliou, J.-C. Peng, G. Petitt, P. E. Reimer, M. E. Sadler, J. Selden, P. W. Stankus, W. E. Sondheim, T. N. Thompson, R. S. Towell, R. E. Tribble, Y. C. Wang, Z. F. Wang, J. C. Webb, J. L. Willis, D. Wise, and G. R. Young, "Measurement of the Flavor Asymmetry in the Nucleon Sea," Lake Louise Winter Institute on Quantum Chromodynamics (Lake Louise, Canada, February 1998).
- L. Veeser, C. Ekdahl, H. Oona, P. Rodriguez, G. Schmitt, J. Solem, S. Younger, S. Baker, C. Hudson, W. Lewis, B. Marshall, W. Turley, A. Bykov, G. Boriskov, M. Dolotenko, N. Egorov, N. Kolokol'chikov, M. Kozlov, Y. Kurpathkin, and A. Volkov, "Isentropic Compression of Argon and Krypton using an MC1 Flux Compression Generator," 8th International Conference on Megagauss Magnetic Field Generation and Related Topics (Tallahassee, Florida, October 1998).
- L. Veeser, C. Ekdahl, H. Oona, P. Rodriguez, G. Schmitt, J. Solem, S. Younger, S. Baker, W. Lewis, W. Turley, A. Bykov, G. Boriskov, M. Dolotenko, N. Kolokol'chikov, M. Kozlov, Y. Kurpathkin, A. Volkov, and N. Yegorov, "Isentropic Compression of Argon and Krypton," JOWOG 37 (Joint United States/United Kingdom Working Group) (Los Alamos, New Mexico, February 1998).
- R. G. Watt, C. W. Barnes, R. E. Chrien, N. D. Delamater, J. R. Duke, N. E. Elliott, P. L. Gobby, V. M. Gomez, J. E. Moore, G. D. Pollak, W. S. Varnum, J. D. Colvin, R. A. Lerche, and T. W. Phillips, "Double-Shell Capsule Implosions at NOVA and OMEGA," 40th Annual Meeting of the Division of Plasma Physics of the American Physical Society (New Orleans, Louisiana, November 1998).
- C. H. Wendt, D. P. Butt, K. S. Lackner, and H.-J. Ziock, "Thermodynamic Considerations of using Chlorides to Accelerate the Carbonate Formation from Magnesium Silicates," 4th International Conference on Greenhouse Gas Control Technologies (GHGT-4) (Interlaken, Switzerland, August–September 1998).

- B. Wood, "Surface Cratering Behavior of High Power Ion Beams," 12th International Conference on High Power Particle Beams (BEAMS '98) (Haifa, Israel, June 1998).
- W. M. Wood, B. Wright, D. Oró, R. D. Fulton, and D. Moir, "Dynamical Measurements of Plasmas Generated by Relativistic Electrons Colliding with Metal Target," International Conference on Plasma Science (ICOPS) (Raleigh, North Carolina, June 1998).
- J. Workman, T. Tierney, S. Evans, G. Kyrala, and J. Benage, Jr., "1-D X-Ray Microscope for Shock Velocity Measurements in High-Density Aluminum Plasmas," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).
- J. Workman, T. Tierney, S. Evans, G. Kyrala, and J. Benage, Jr., "Spatially- Temporally-Resolved Shock Densities using a 1-D X-Ray Microscope," 12th Topical Conference High Temperature Plasma Diagnostics (Princeton, New Jersey, June 1998).
- F. Wysocki, "Characterization of a Target Plasma for MTF," 8th International Conference on Megagauss Magnetic Field Generation and Related Topics (Tallahassee, Florida, October 1998).
- F. Wysocki, "Possibilities for a Spheromak Target for Magnetized Target Fusion," Innovative Confinement Concepts Workshop (Princeton, New Jersey, April 1998).
- G. Xu and J.-C. Peng, "Gluon Polarization and Dihadron Production at RHIC," RIKEN BNL Research Center Workshop (Upton, New York, April 1998), in *Proceedings of RIKEN BNL Research Center Workshop 7*, 131 (1998).
- H.-J. Ziock, "Diamond Detector R&D," Workshop on Physics and Detectors for Future e^+e^- Linear Colliders (Keystone, Colorado, September 1998).
- H.-J. Ziock, D. P. Butt, K. S. Lackner, and C. H. Wendt, "The Need and Options Available for Permanent CO₂ Disposal," AIChE Topical Conference on Pollution Prevention and Environmental Risk Reduction (Miami Beach, Florida, November 1998).

